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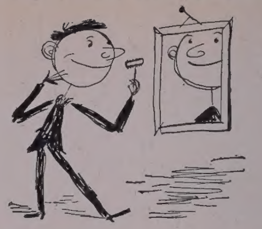

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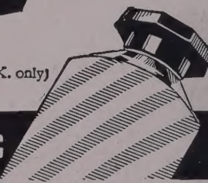

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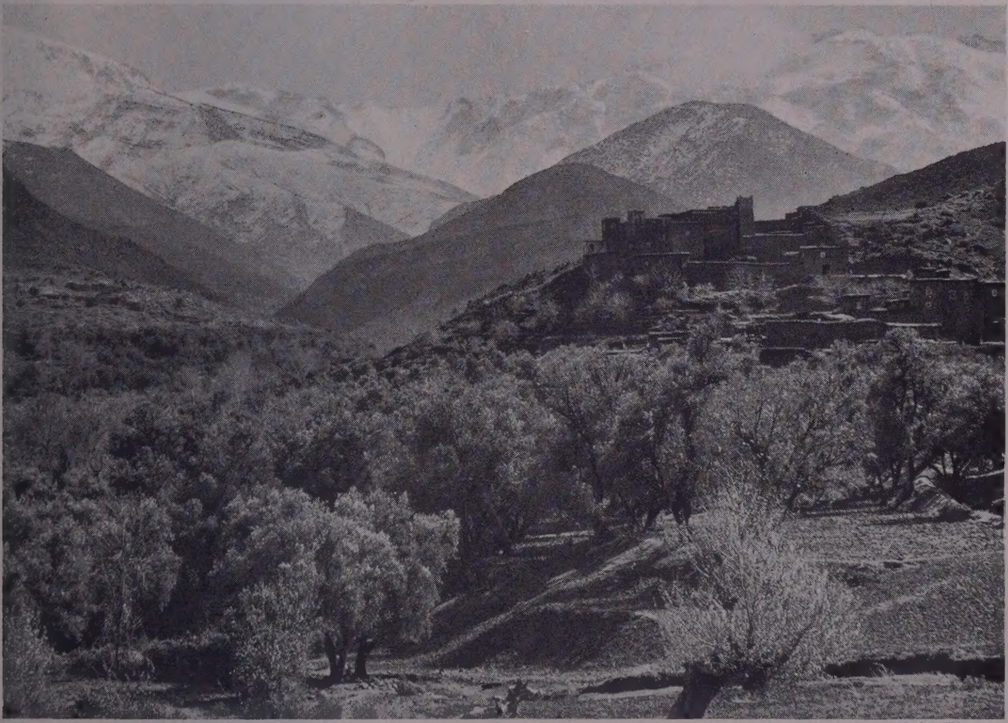
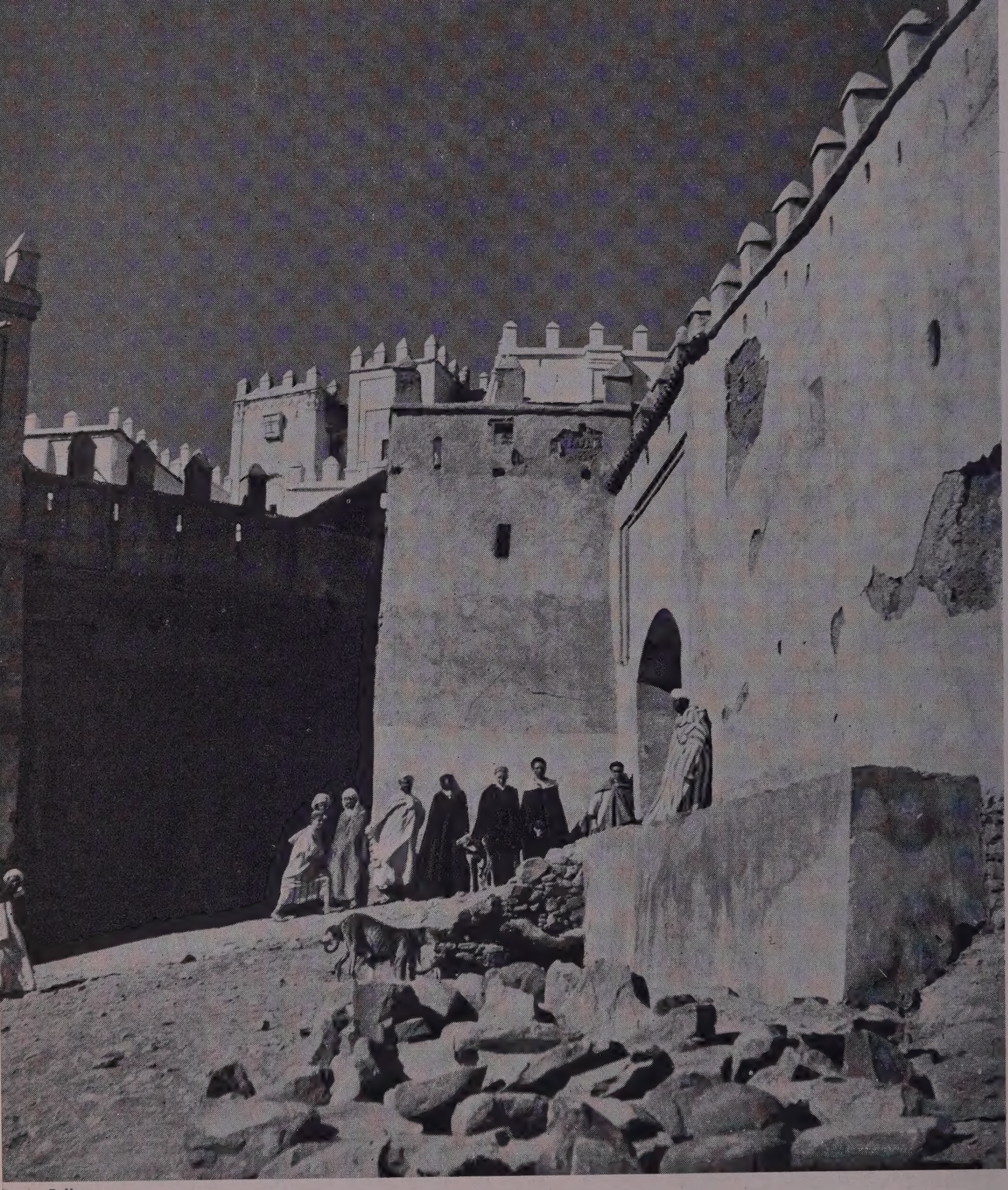
High up in Morocco

by SACHEVERELL SITWELL



From 'High Atlas' Philip Thornton

Only a few years ago the mountains of Morocco were quite unknown. Their pacification has taken place within the last twenty-five years. And, in many places, more recently than that. During a tour of the Sud-Marocain in the spring of 1939 I visited Tafraout, one of the most stupendous landscapes that could be imagined, and have reason to believe that I was the first Englishman to set eyes upon its wonders. This will show the virgin nature of the Sud-Marocain. Our first illustration is typical of such scenes. We have before us the snowy summits of the Atlas Mountains, a vale of olives, the reddish soil, and the towers and flat roofs of a kasba. *Down below in the valley there will be flowering oleanders in their time. The kasba, itself, is typical of that peculiar Berber architecture which, in its more dramatic specimens, can only be compared to the buildings of the Hadhramaut, in Southern Arabia, as we can see them in the photographs of Miss Freya Stark. This particular instance of a kasba is moderate in size compared with many. Perhaps they are to be seen at their most stupendous between Tinerhir and Ouarzazate. The French painter Majorelle, who lives in Marrakesh, has published a sumptuous volume upon the kasbas so that they remain in some sense his artistic property. They are fascinating to an artist because of their startling colours, the clay of which they are built being dull golden, almost purple in some cases, or of an incredible red, or orange. The kasbas of Aminiter are a favourite subject with Majorelle. They are red or purple by the varying lights of day; those of Tinerhir are golden like wet sand; while the kasbas along the gorge of the Dadès, near Boumalne, are of a fiery sunset red. But what, after all this, is a kasba? In simple terms it is a fortified village, an agglomeration of Berber houses within a common wall; but, also, a feudal castle, of which the finest Moroccan instance will be found upon the following page*

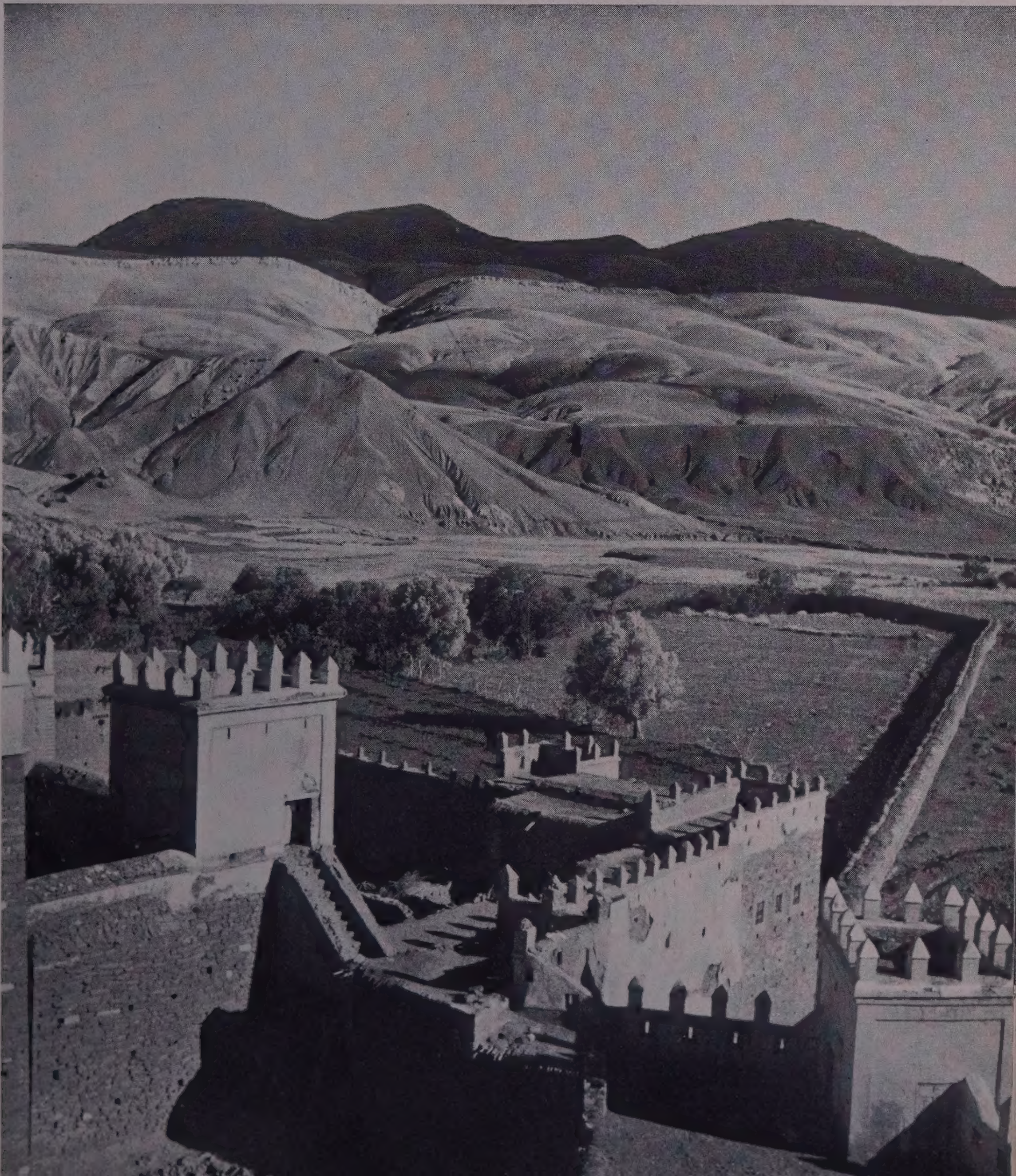


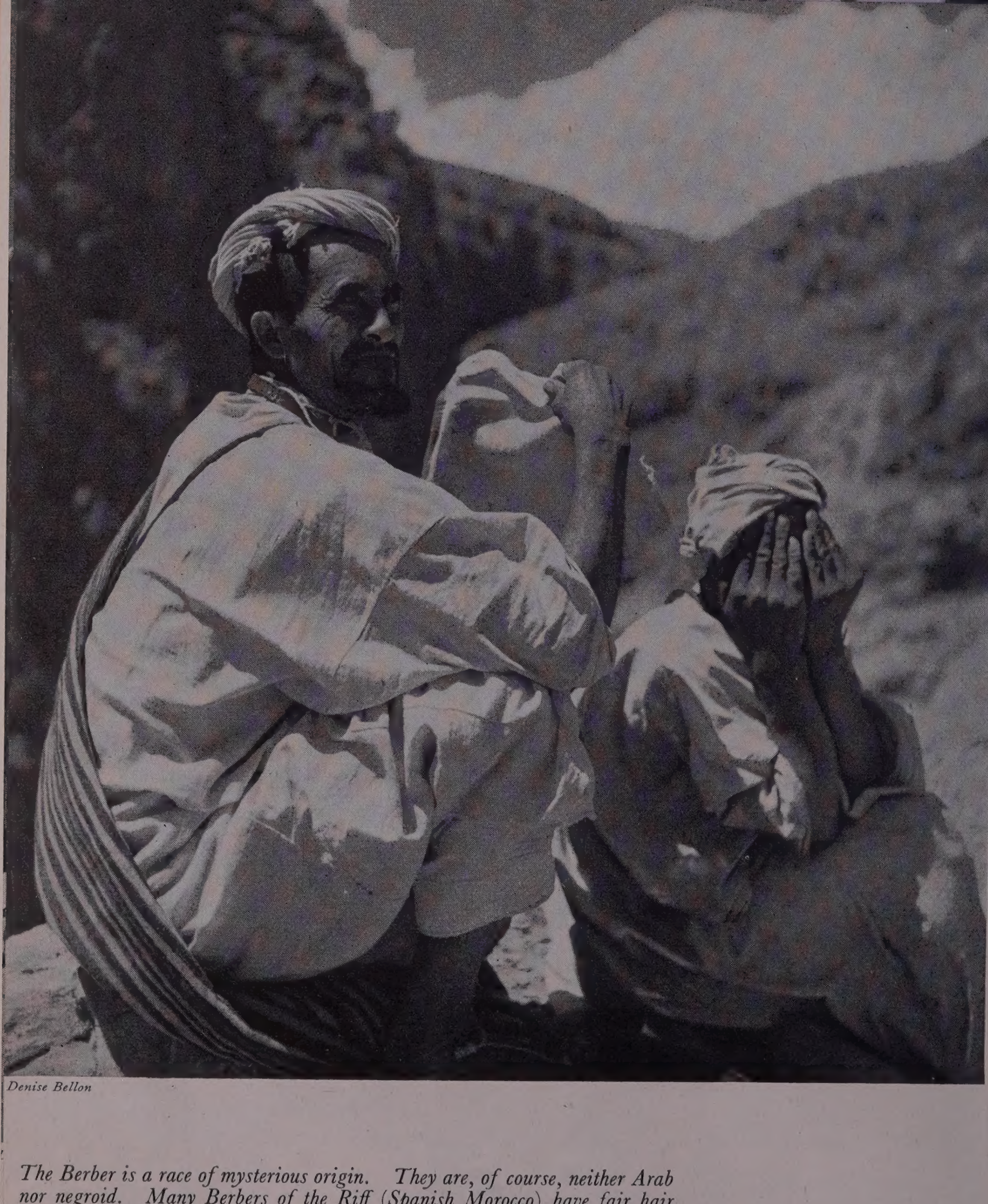
enise Bellon

The Kasba of Telouet is the feudal castle of El Glaoui, the famous Berber chieftain who resides in Marrakesh. As many as a thousand of his retainers may live within its walls. The stables are full of barbs for hunting, and in the foreground of the photograph are some of the sloghis, *or boar-hounds, which originated at Telouet and have never yet been imported into Europe*

From the ramparts of Telouet we admire the landscape. This is six thousand feet above the sea and, in winter, is quite cut off by snows. The son of El Glaoui lives here in state, and dispenses justice. His Berber retainers, in medieval fashion, all carry a curved dagger with a silver handle

Denise Bel



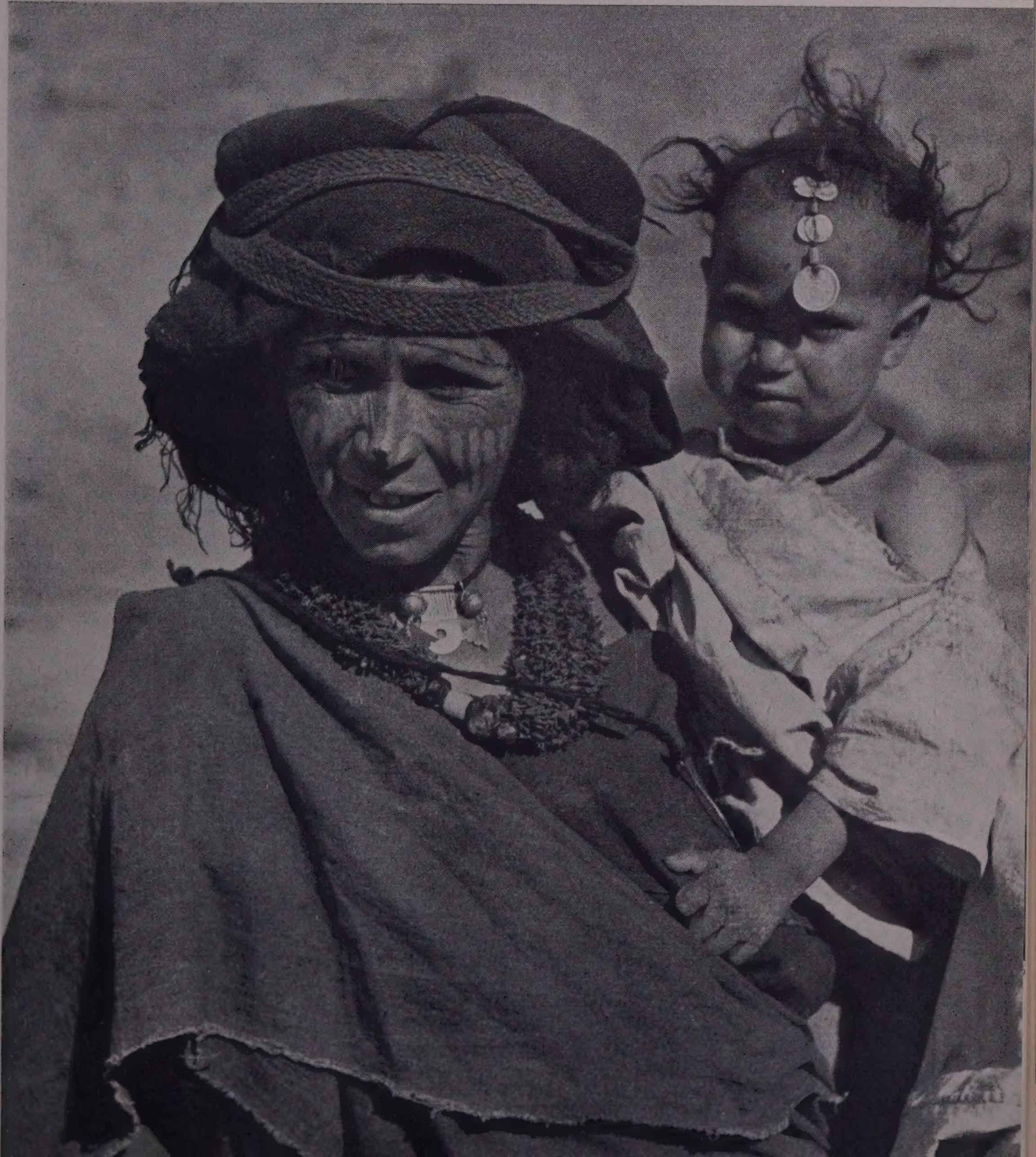


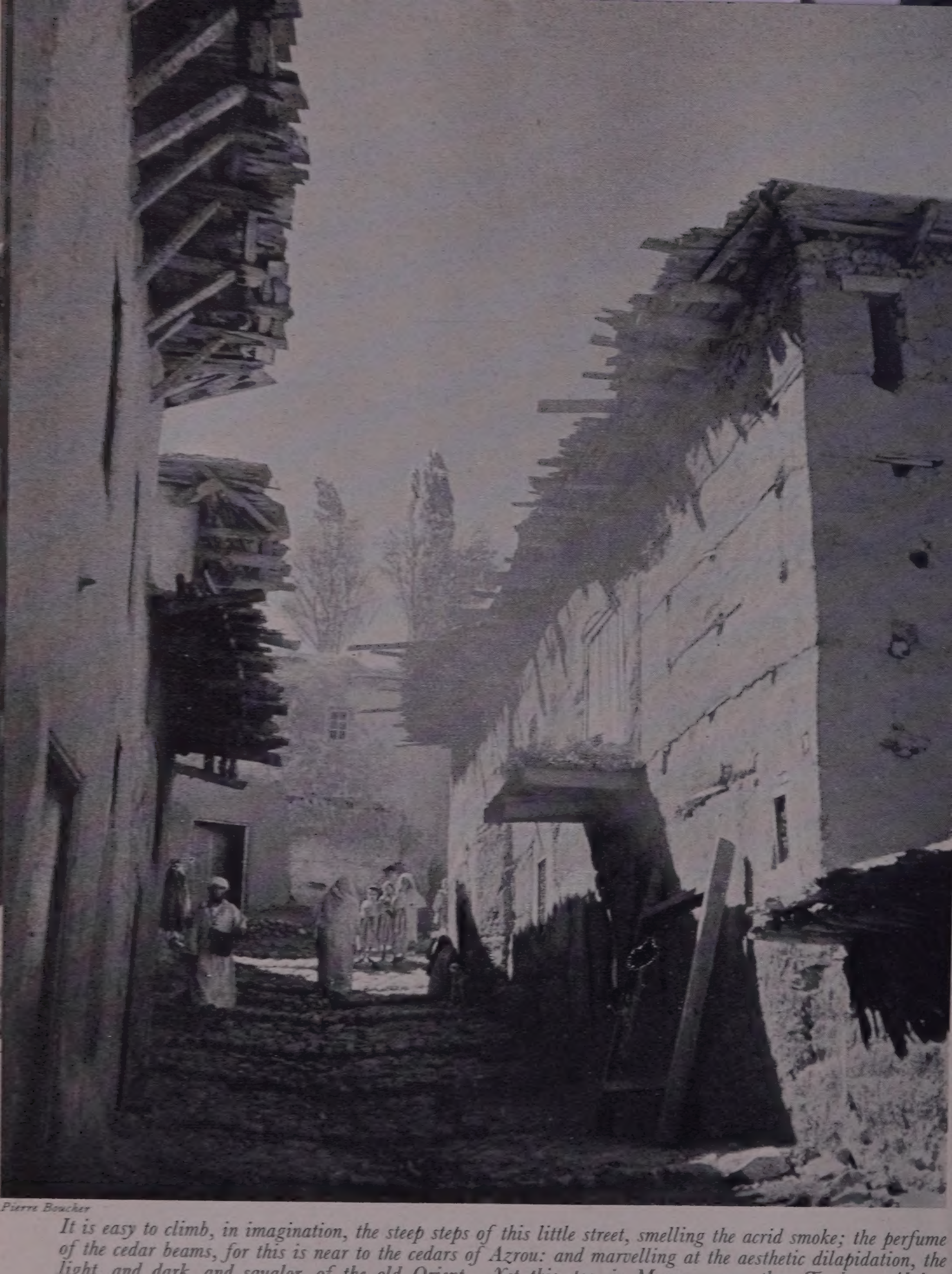
Denise Bellon

The Berber is a race of mysterious origin. They are, of course, neither Arab nor negroid. Many Berbers of the Riff (Spanish Morocco) have fair hair and blue eyes. But this one, who looks so proudly out of his picture, is the typical Moor, the true Othello, quite distinct from Tunisian or Algerian

The Berber women are dressed in home-dyed cloth of blue, and wear this head-dress. They have, generally, the thin-pinched features of the woman in this photograph, with the tribal marks upon their faces. Their high, shrill voices, gabbling like turkeys, can, perhaps, be imagined from the illustration

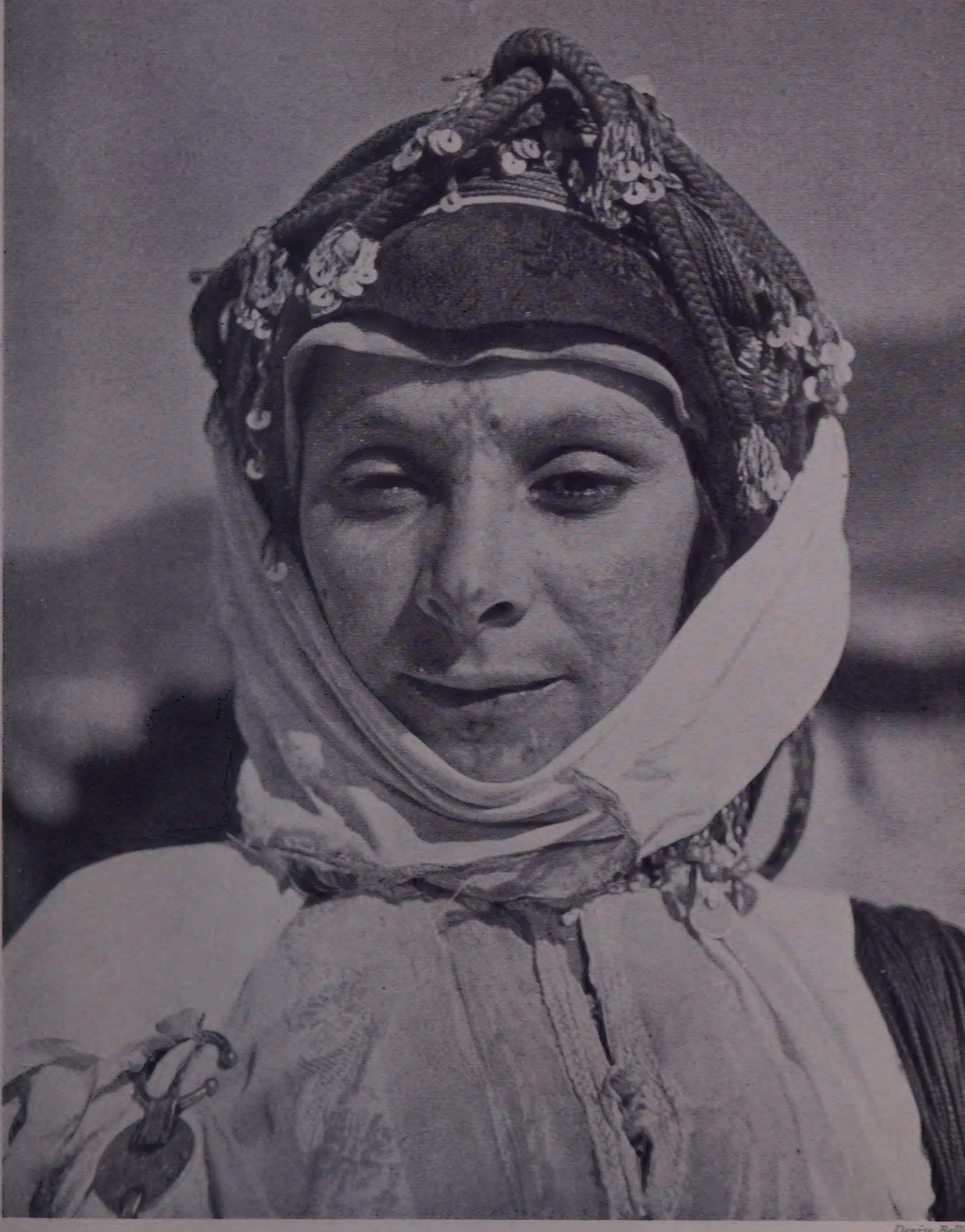
Pierre Boucher





Pierre Boucher

It is easy to climb, in imagination, the steep steps of this little street, smelling the acrid smoke; the perfume of the cedar beams, for this is near to the cedars of Azrou: and marvelling at the aesthetic dilapidation, the light, and dark, and squalor, of the old Orient. Yet this, too, is Morocco more than Tunis or Algiers

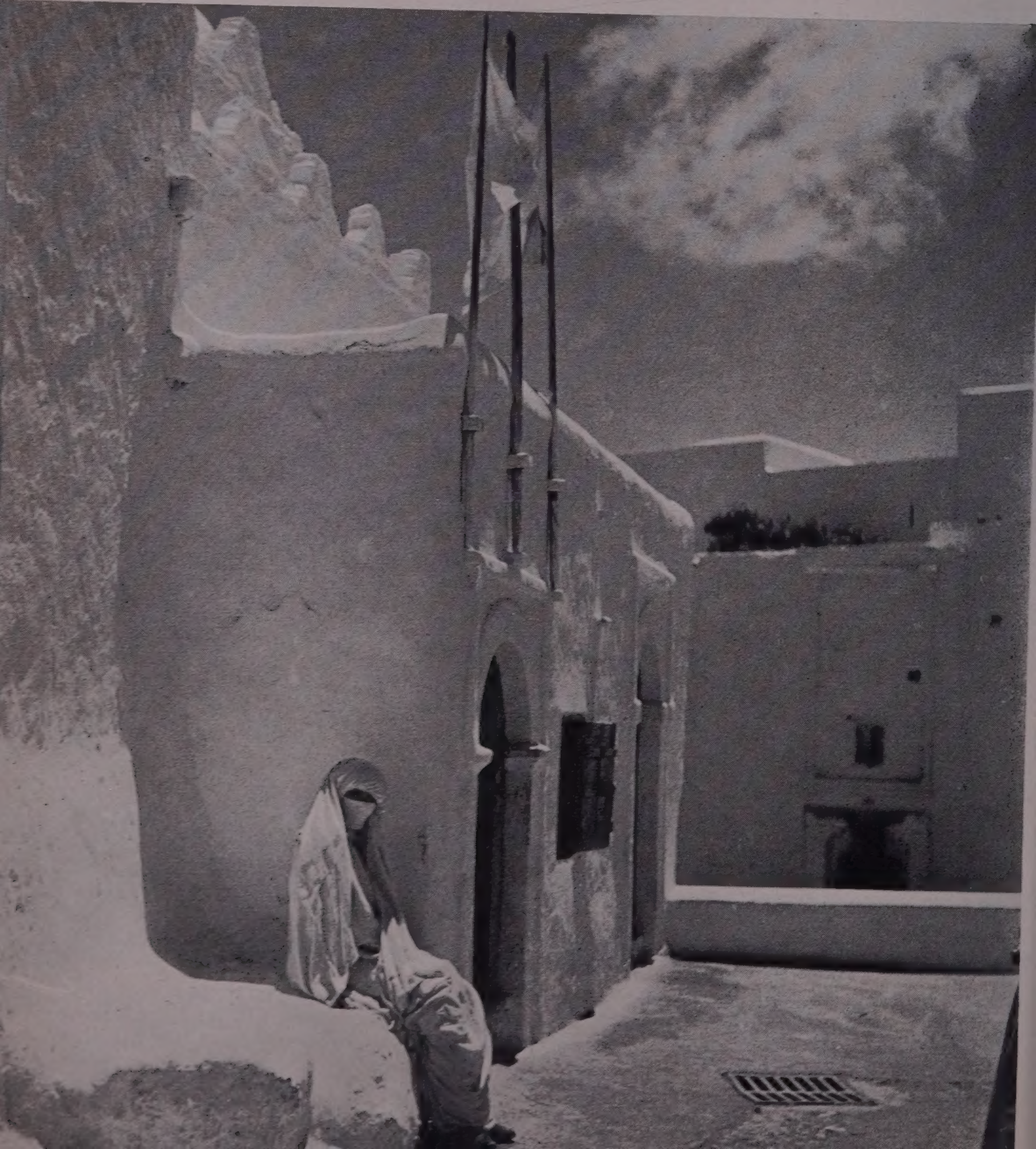


Denise Bell

Some Berber women, especially the dancers, are of great beauty. The town of Tiznit in the extreme south is famous for its school of Sheikhat dancers, of whom this could be a specimen. Berber songs, though monotonous, become beautiful by repetition. Both in song and dance they are quite different from the Arab

Azemmour is a little town upon the Atlantic, near to Mazagan. Its whitewashed walls are a delight in themselves and, above them, we must picture a blue sky, as blue as the Atlantic. Frost is unknown at Azemmour, and it seldom rains. It is untouched by foreign influence and, therefore, a little paradise, if you are not afraid of poverty

enise Bellon



Denise Be

Morocco is of no moment, in films or novels, without the Foreign Legion So here they are, working as pioneers upon a road. Their exploits i Morocco are legendary and, mostly, true. Quite a number of these brav men have remained true to the Allied cause

Britain's Loneliest Island

I. Settling in on North Rona

by F. FRASER DARLING

"But how did you live?" was a question often put to Dr Fraser Darling when he returned from long spells of observation on grey seals and other wild creatures in uninhabited islands. In two articles of which this is the first he gives the long-awaited answer. The story of the seals was told in The Geographical Magazine *for July 1938*

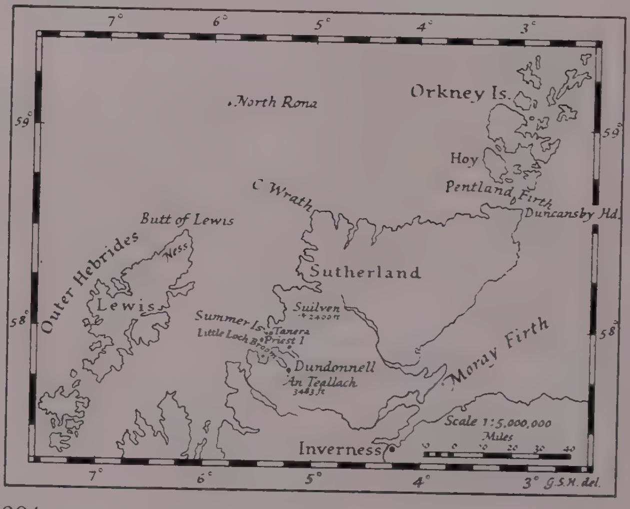
THE horizon of a man at sea level is eleven miles away; from the bridge of a ship it may be more than twice that distance, but weather soon puts a limit to horizons even though a mountain be climbed in order to see a few miles farther before the vast and inevitable curvature of the earth's surface says 'No more'. Nevertheless, it was from the summit cairn of that shapely Scottish mountain, An Teallach, that I first set eyes on North Rona "afar off in the lap of wild ocean".

It was early morning of a June day, in which month Highland weather is often clear and dry, and at this hour the heat haze was not dancing to prevent my seeing a small speck in the sea a hundred miles away. Just a speck with an apparently rounded top; there was no detail to be seen, but as it did not move from the absolute direction in which North Rona should be, I felt satisfied I had seen the island, which occupies less than half a square mile in area, which is 355 feet in height and lies nearly fifty miles north-west of Cape Wrath and north-east of the Butt of Lewis.

I remember thinking, that morning, that the day would come when I should go ashore on North Rona, and now, as I write this in my study on the island of Tanera, I can see the summit of An Teallach and remember three landings on that British Isle of Rona which rarely appears on the maps. And before dismissing the subject of views, the immensity seen from North Rona is worthy of mention. It was only once in a while that the mainland of Scotland or any land could be seen at all, but on those rare days Nature gave freely. From the summit cairn of Rona we used to see the Orkneys and the symmetrical cone of the Hoy ninety miles away to east-south-east. Then, across the Pentland Firth was Duncansby Head, and stretching westwards from there the fine panorama of the North Coast of Scotland and its mountains as far as Cape Wrath.

We could not tell at that great distance that the coast turned abruptly southwards at the Cape, for the line of mountains carried on until we could see the well-known and unmistakable shape of Suilven, and beyond again—An Teallach.

Without doubt we were the most inaccessible people in the



All photographs by F. Fraser Darling

At home on North Rona: Dr Fraser Darling, in a beard which, he says, "I removed immediately after it was recorded in this photograph and for obvious reasons will not encourage again!"

British Isles and yet, from our remoteness, we could see the hills of home. We could hardly have believed it possible to see Orkney and the West Coast of Scotland in one vast panorama. We used to feel then, as we have felt before in our periods of isolation on uninhabited islands, that that far, impersonal landscape was some figment of dream and that this island where we had our being and where work lay was the real hub of the universe.

How did we get there and what did *we* do are the questions which come to us after I have tried to lecture seriously on the life-history of the Atlantic grey seal. It was that 'son of the King of Norroway' who caused us to go to North Rona and, as I have told something of his life before in these pages, I will confine myself more to the tale of our lives spent among these strange people of the sea.

Mrs Marian Fraser Darling: a North Rona picture taken on December 22, 1938

When we lived for two six-month spells (winter and summer) on Priest Island of the Summer Isles and one four-month spell (in autumn and winter) on the Treshnish Isles, west of Mull, we felt that we were in training for the really big job on North Rona. Our tent life on those uninhabited islands involved a certain amount of hardship which we were glad to endure in order to acquire the technique of living utterly beyond reach of man for a period we intended to be six months, but which might be best part of a year because of the difficulties of both getting ashore and leaving the island again. Perhaps it was a lengthy apprenticeship, but we cannot regret it now that we can say that we wanted for nothing all the time on Rona, and that the experience which seems to make people shudder was in fact, for us, one of the happiest periods of our lives.

"But supposing you needed a doctor!" is a frequent remark. Well, just think it over this way: in that isolation we could not contract infectious or contagious diseases, so the medicines possibly needed for them could be ruled out of our chest. We enjoy initial good health, and once on the island our greatest insurance is care. Accidents may happen and climbing about the cliffs can be a source of danger, but if you make no step without conscious care, risk is reduced to a minimum. Three hundred acres, the area of both North Rona and Priest Island, seems very little, but if an accident did happen you might take a lot of finding, so we always make and keep the rule that whichever of us goes out alone tells the other the intended direction and extent of movement. We have a profound belief in *vis medicatrix naturae* and the staple of our medicine

Alasdair Fraser Darling exchanging courtesies with a shag

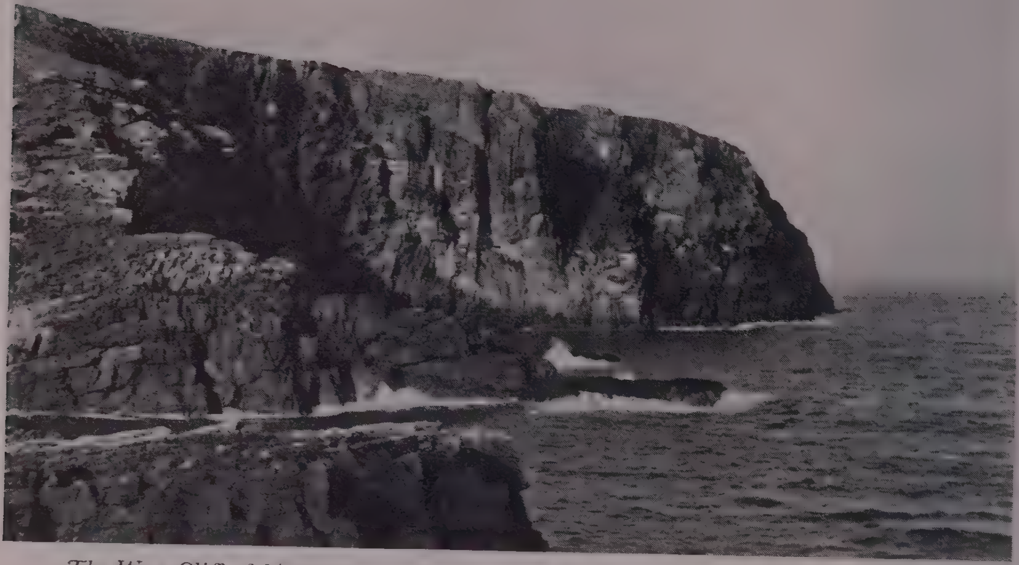
chest was morphia, which, happily, remained untouched.

The prospect of North Rona worried our friends and relations to such an extent that they badgered us into purchasing a wireless transmitting and receiving set for the expedition, though we knew quite well how isolation and care between them—and our extensive preliminary training—would be the best defence we had. And so the wireless went with us—and never worked on the transmitting side! This failure, however, seemed to be taken seriously by our good friends His Majesty's Government, for it was arranged that one of the patrol cruisers should pay us an occasional visit when they were near Rona.

The worst part of an island expedition, or any other for that matter, is the period of preparation. I am not one to worry unduly; to me, a man can but do his best and after that it is no good worrying. But in that time of getting ready you must be quite certain you are giving of your best. We decided our newly acquired ruin of a property on Tanera of the Summer Isles should be the base for the Rona expedition, for this island has a fine natural anchorage and we have a stone pier and little harbour from which gear could be loaded into a launch with ease.

All well and good, but such essential and perishable stores as flour and meal we had taken across Scotland to our old home at Dundonnell, sixteen miles by sea from Tanera. We were going to take them in our launch from Little Loch Broom to Tanera a few days before finally leaving for Rona. The weather turned against us; for the first ten days of July 1938 we had south-westerly gales and torrential rain day after day, so that only on the morning of July 11, the day we were to go to Rona, could we load up the stuff and expect a dry journey to Tanera.

Our launch is one of the best, and as we came into the anchorage of Tanera that day to find the cruiser waiting for us I gave



The West Cliff of North Rona, topped by green slopes, the sea licking white at its foot

rein to my conceit. Our son was ten years old and he took the bow position with the boathook; I was at the engine and my wife at the tiller. We came alongside the cruiser faultlessly under the eyes of those experts aboard. That, for me, gentle reader, was a crucial moment. We just had to be as smart as they were for our own pride, even though those men aboard were the kindest on earth.

Our cordial introduction was scarcely over before the sailors were stripping our launch of gear. Among the flour, meal and bedding, were three hens, hardy and rather ancient heroines of our earlier island expeditions. "Ah!" said Cap'n M., "hand those up to me." If an animal is in charge of sailors you can forget about it for it will be well looked after. Late that evening I found Cap'n M. leaning over the side of the ship asking my one neighbour on Tanera to fetch half a bucket of gravel from the shore. When the stuff came alongside, the Captain took the bucket in himself. "Hens must have grit, you know," he said.

* * *

It is my misfortune to be prone to sickness in ships, despite my love for the sea. The next twelve hours, therefore, need not be recorded here. I heard the engine bell ring down for half speed, dead slow and then stop—time for me to stagger out.

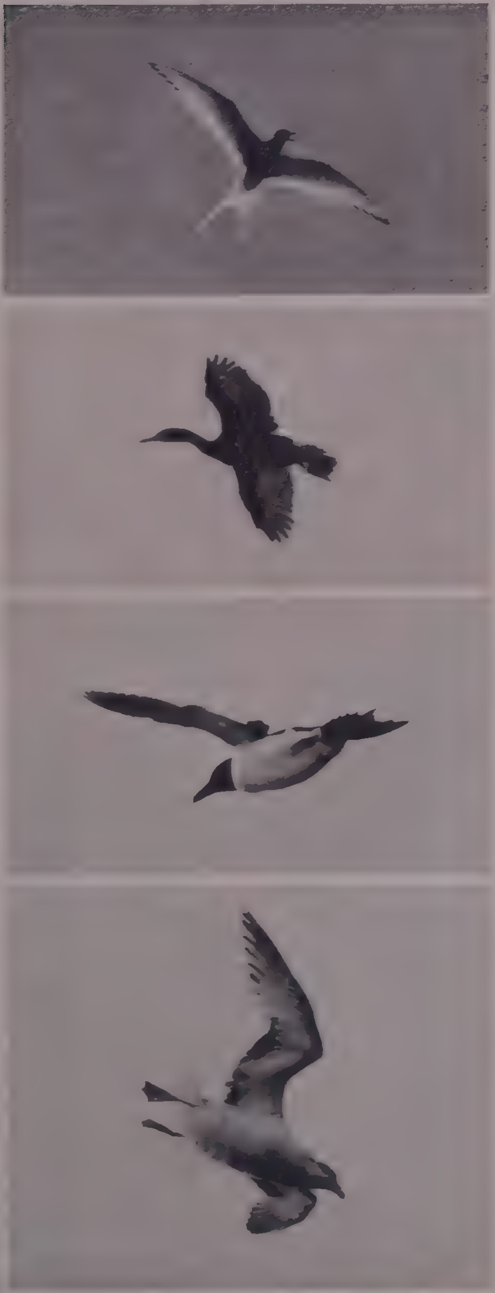
The spirit can rise superior to seasickness and at this moment it is the wonder of that first view of Rona's cliffs that I remember. My heart was full of sheer joy. Cliffs that were black and red and grey, topped by slopes of bright green; the sea licked white at the foot, and immediately the great practical question leapt in my mind—should we be able to land on this island which is notoriously bad for landing? For the moment that was not my business, and wonder returned as I looked at the hundreds of thousands of sea birds which flew from the cliffs, startled by this most unusual advent of humanity and a ship.

It was tremendous and awe inspiring. The swarms of puffins, guillemots and razorbills circled like bees from the hive of the cliff; kittiwakes flashed white from every coign of the rock face which would hold a nest, and fulmar petrels glided silently and on motionless wings like small monoplanes. Shags flew hither and thither, black and cumbrous compared with the more graceful smaller birds. The sound of it all was the most thrilling a bird watcher knows, the composite skirl of a million throats proclaiming that it is summer. All I could think in that moment of wonder was—and we are going to live here and know every bit of this place as if it were home. After all, it was home.

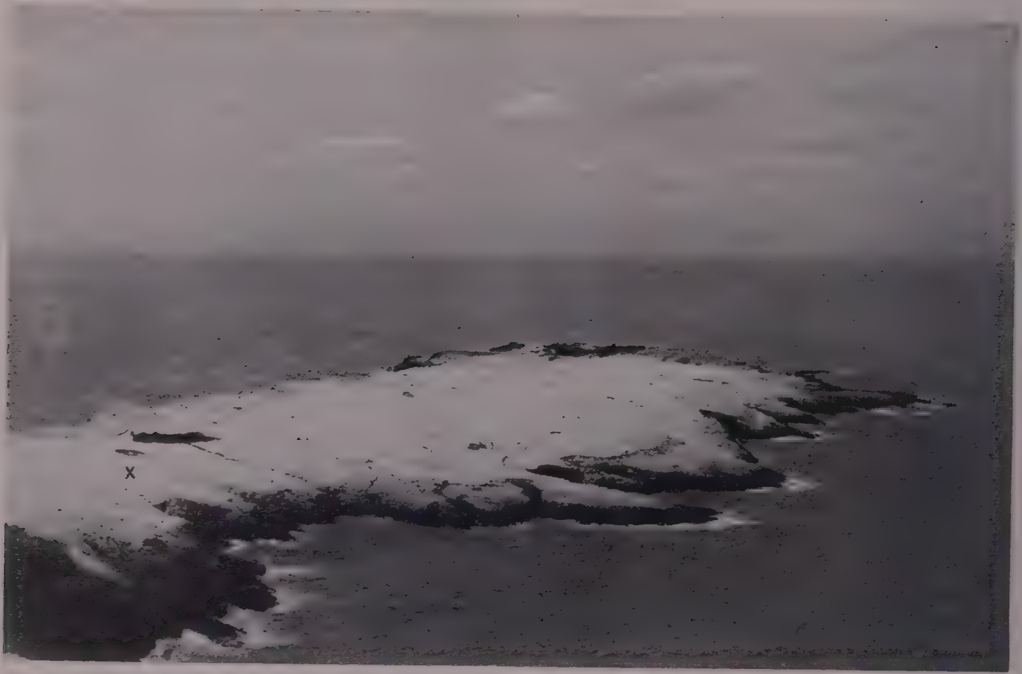
Then I had to become more practical for I alone knew just where the landing was. The Captain said Alasdair and I were to go ashore first trip and take a certain amount of food with us as well as a little tent. This was an island with a sinister history and he was taking no chances.

The launch was down now and soon we were bobbing over to Geodha Stoth on the eastern side of the northern peninsula of Fianuis. There was as much swell as we liked against these low cliffs, but we saw one face where the swell did not break and being sheer it was almost like a dock. We sidled up to it and I pushed Alasdair ashore. It was a little gesture it pleased me to make, to let the child be the first of the expedition to land on Rona.

Forty or fifty grey seals in an excited state came round the boat and throughout the day they maintained a lively interest. I looked at them as beasts I now understood better than most men. These individuals had never seen me before but fancy put it in my mind as I looked into their deep eyes that they knew me for a friend, as one who knew their language and civilization, though imperfectly. Those sleek heads did not show fear.

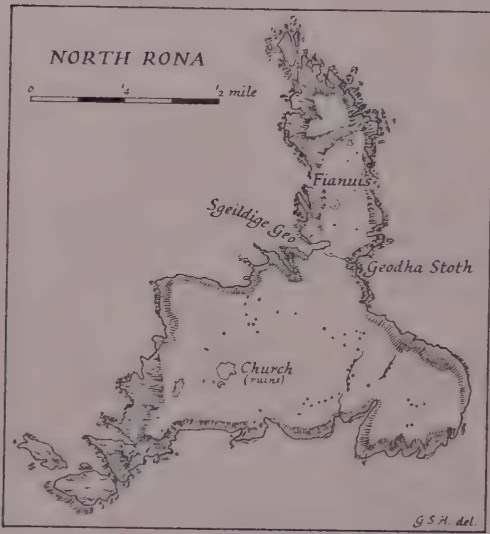


Sea birds from the cliffs in flight. From top to bottom: (1) arctic tern; (2) shag; (3) razorbill; (4) fulmar petrel



On the narrowest part of the neck of Fianuis, a cross marks the author's camp

Once ashore and the launch going back to the ship for gear, it was for me to find the right place for the camp in the shortest possible time. I chose the little sheep fank at the narrowest part of the neck of Fianuis. If these walls have endured, I thought, it would not seem that the sea comes right over, though the western ocean was pounding the fifty-foot cliffs only forty yards away. Also, these walls could be raised a little and they would provide shelter all round the base of the hut. My decision thus rapidly made was one we never had cause to regret.



When people have looked at the map of Rona since our return, they have often said "But why did you not go into the middle of the island where I see there are some ruins marked?" The answer is this: Fianuis is only fifty feet high and the journey to the fank from Geodha Stoth is one of a hundred yards.

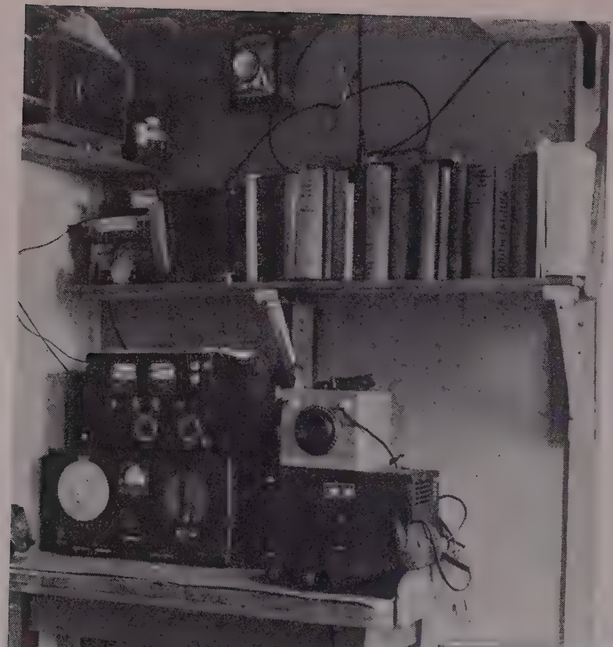
Southwards from the sheep fank the ground rises very steeply to the 300-foot ridge of the island. The ruins are a good way below the ridge on the south side. About once in a blue moon a man may jump ashore on the south side of the island and then climb a hundred feet of bare rock to get on to the green. This was not one of those days, and even if it had been we could not have got all our heavy gear up the southern cliffs. Ours was not a light outfit camping on the island for a week, but a family expecting to stay six months and possibly longer. There was nowhere else for it but the fank on Fianuis, though we knew quite well we should long for the security of the middle of the island. Finally, the weather and possibilities of landing are so changeable that we could not afford to spend a long time transporting gear once it was ashore. The main job, not to be lost sight of, was to get it ashore and out of reach of the sea.

The weather on this day became kinder and kinder. As the tide fell the little dock-like rock became better for landing and we were able to keep a continuous stream carrying up to the fank. All the stores were ashore by one o'clock and piled in the fank under a heavy tarpaulin truck cover which I had especially bought as a buffer against the weather, should an accident befall the huts.

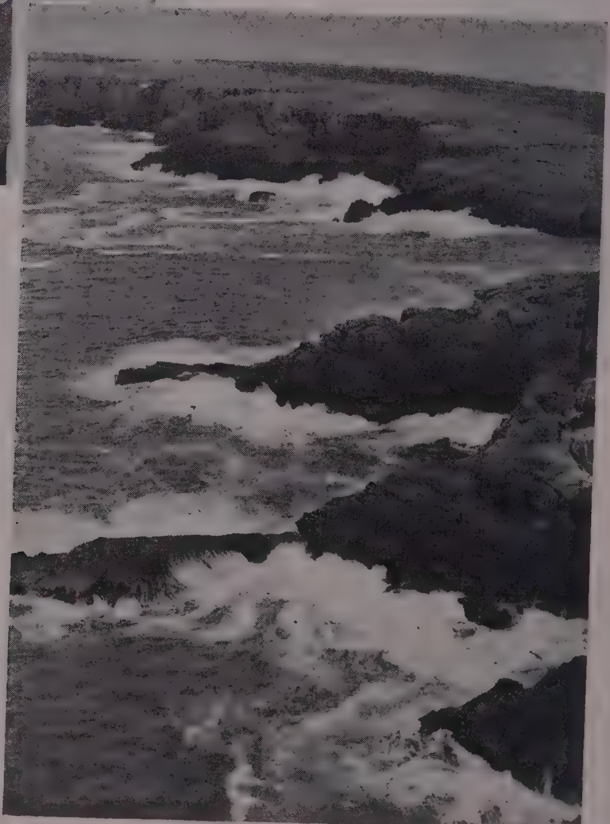
The huts themselves came ashore in sections after lunch and a squad of men fell to erecting them. I had brought a box of necessary tools which were now constantly in use and saved much time. The huts were up before nightfall and we anchored them to the ground with heavy gauge wire hung on to large boulders. They never moved their positions throughout the winter, though in times of heavy gales we have seen the roof fall and rise under the pressure of wind and the front of the hut sag unpleasantly.

It was intended that next morning the ship should help us put up our wireless tackle, but a wind sprang up and we saw the ship depart before breakfast. She came back ten days later, but again the wind took her out of it and we were left to do this job ourselves.

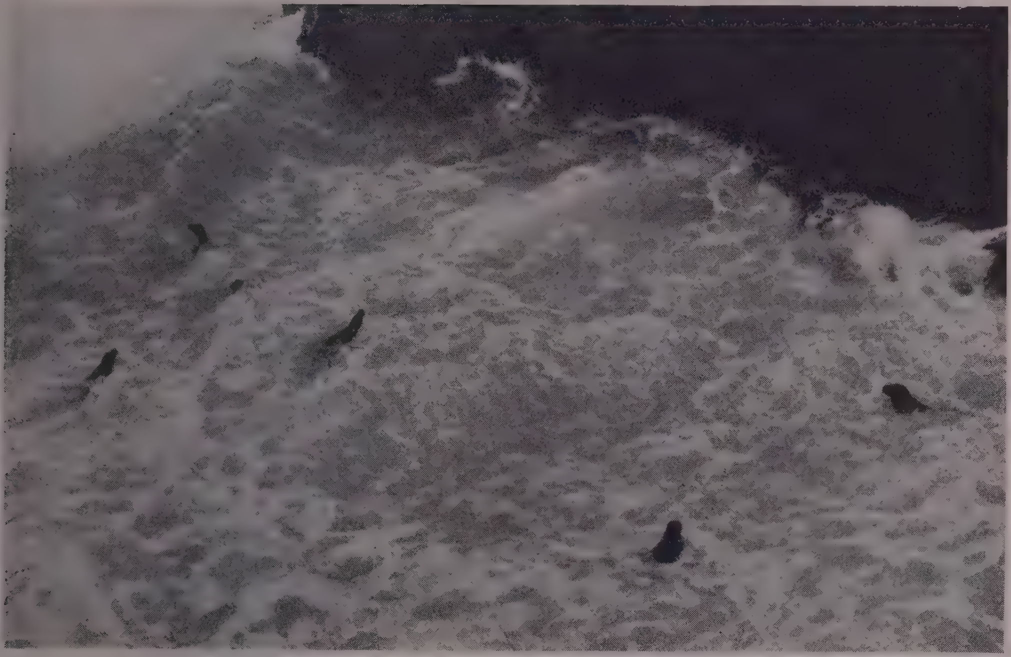
The huts, brought ashore in sections, were anchored to the ground with heavy gauge wire



Inside: a corner of the 10′ × 8′ hut on North Rona showing the wireless set that failed to transmit and caused so much anxiety among distant friends



Outside: the Atlantic surf plays constantly all round the coasts of North Rona, the little island that stands "afar off in the lap of wild ocean"



The cause of the expedition: Atlantic grey seals, at play in the surf off Rona

The firm supplying the gear had done their best in providing working drawings for one so ignorant as myself. I loathed doing all this work which had absolutely nothing to do with seals, but it had to be done and I worked steadily the whole of one Sabbath day. Next morning we started the little generator engine, put in the switch and depressed a knob on the receiver. And lo! the first extraneous radio sound ever heard on North Rona was the sugary tones of the B.B.C. cinema organ. Anticlimax.

Now for the transmitter: would this also work and should we join in that merry talk among trawler skippers? We were going to try to get in touch with the Lighthouse at the Butt of Lewis on Tuesdays and Fridays just to say we were all right. We changed over the switch (*vide* working chart) and depressed another button. Nothing happened and no little pointers waggled. And then a smell of heated fat greeted our nostrils and we opened a heavy metal box called a power pack, inside which a lot of greasy paper was certainly melting.

There was another thing in there also, a very pretty lamp called a valve. Even as we watched, a lovely violet flame waxed within it, reached an ecstatic zenith and then quite suddenly went out. The hot fat smell was getting worse so we rightly assumed we were not transmitting, and that was the end of that. It did not bother us in the slightest, but back on the mainland the newspapers were making scares out of nothing. We knew nothing about it of course, but it was not pleasant for relatives and friends. Had they not badgered us into buying these playthings I am convinced they would not have worried about us half as much as they did when they received 'no news from exiles'.

Total Eclipse

by ERNEST TILLOTSON

A TOTAL eclipse of the sun, which will be visible in parts of Colombia, Venezuela and Brazil, in South America, and also in parts of South Africa, will take place on October 1, 1940. The eclipse will not be visible in the British Isles.

For a deep sense of solemnity, for a brief glimpse of the usually hidden beauties of the outer regions of our sun, and for a renewed realization of the majesty and greatness of our solar system, there is little to equal the sight of a total eclipse of the sun. No wonder that the uninstructed peasants in remote villages in China beat their gongs and wave their coloured streamers to frighten away the 'dragon' which is devouring the sun; no wonder that in parts of India the time is considered excellent for a bathe in sacred waters; no wonder that birds and animals think that night has overtaken them—and little wonder that learned astronomers from 'the three corners of the world' should gather in the most outlandish places with all their wonderful assortment of apparatus; for an eclipse of the sun which is total is a rare event and only happens in one place on the earth once in about 360 years.

In 1860 Simon Newcomb, an American astronomer, travelled by land and canoe for six weeks to see the eclipse in North-West Canada, and when he got there clouds obscured the view. In 1870 the French astronomer Dr P. J. C. Janssen might have been seen one dark night over the Prussian lines, leaving the besieged Paris in a balloon, in order to make a journey to view the eclipse. Again clouds obscured the sight which would have rewarded him for his pains. Father Perry, an English Jesuit and astronomer, suffered agonies with sea-sickness on several occasions and eventually died of fever a short time after viewing the West Indian eclipse of 1886. Luckily such occurrences as these are not usual and there have been many fortunate and brilliantly successful eclipse expeditions.

Eclipses of the sun are caused when the new moon comes directly between it and the earth, the eclipse beginning somewhere on the west side of the sun's disc and the moon's shadow sweeping across the earth's surface from west to east.

The earth travels nearly in a circle round the sun, keeping approximately at a distance of just under 93 million miles. The moon travels in a pronounced ellipse round the earth at an average distance of just under 240,000 miles and a minimum distance of rather more than

220,000 miles. The inclination of the plane of the moon's orbit to the approximate plane which always contains the earth and sun (ecliptic) is just over 5° and therefore it does not often happen that the moon's shadow is cast on the earth.

Apparently by chance, it so happens that the size of the moon is such that at a total solar eclipse it just covers the disc of the sun. When an eclipse takes place at a time when the moon is approximately at its greatest distance from us, it does not quite cover the sun's disc and the eclipse is said to be annular. The deepest part of the moon's shadow at a total eclipse is called the umbra, and round this is the less dense shadow called the penumbra. A person standing in the umbra sees a total eclipse, whilst a person standing in the penumbra sees a partial eclipse. In the 1940 eclipse at a place expecting totality, the eclipse will first be partial, with the moon obscuring a portion of the SSW of the sun's disc. As the moon travels across the sun's disc from approximately SSW to NNE, more and more of the sun's light will be cut off until the eclipse is total. After this the eclipse will become partial again until the moon has passed by, leaving the sun again unobscured in all its splendour.

The earliest reliably recorded Chinese eclipse is that of February 22, 719 B.C., visible at Keuh Fow, the capital of Lu, and recorded in the Chun Tsew or annals of the State of Lu. Eclipses were recorded in Babylon as early as 1069 B.C. The Greeks recorded eclipses, and the eclipse of August 14, 309 B.C. would be most useful for testing the tables of the position of the moon if we knew the exact position of Agathocles when he observed it. He was at the time on a voyage from Syracuse to Carthage. It is hoped that archæologists will one day discover the Assyrian lists of eclipses, as these would also be of great value in the improvement of lunar theory should they contain details of time and place.

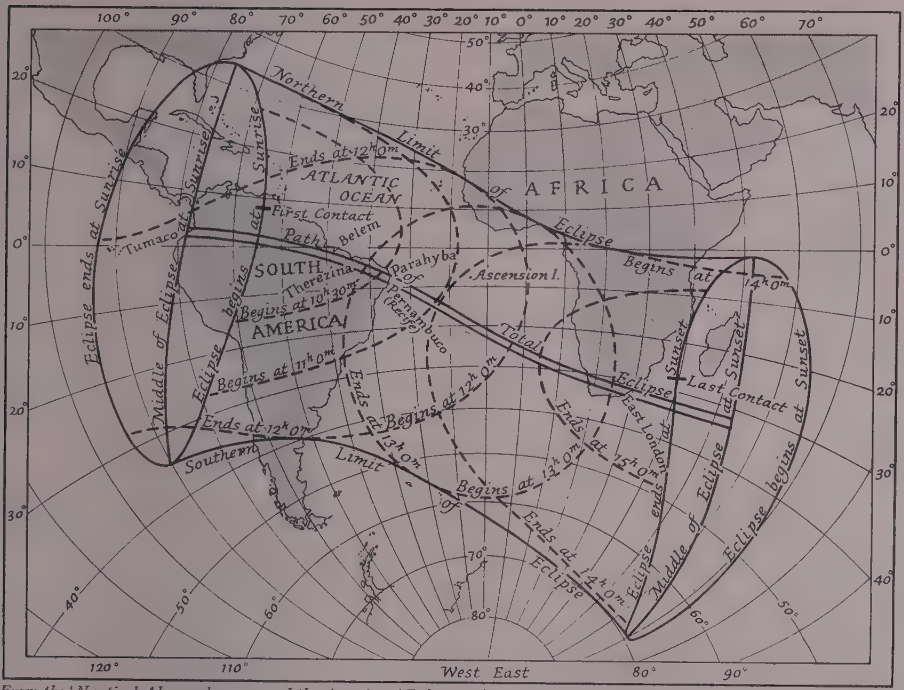
When the records of eclipses are examined it is seen that they tend to recur in cycles, and this gives an approximate method of forecasting them. The Chinese were never able to forecast eclipses very exactly owing to incorrect cycles and difficulty with the moon's latitude. The most remarkable of all the cycles concerning the recurrence of eclipses is the Saros (a cyclic period of lunar months discovered by the Chaldeans) the origin of which is unknown. It is thought that the Chaldean astronomers taught it to Thales about the 6th century B.C., but it was brought to the notice of the modern world by Halley (1656–1742), who rectified a passage in Pliny's *Natural History*, and, using his own background of astronomical knowledge, evolved a connection between Pliny's work and the Chaldean Saros. The Saros is equal to a period of 18 years 12⅓ days when 3 leap days intervene, 11⅓ days when 4 leap days intervene, or 10⅓ days if 5 leap days intervene. After this period nearly the same eclipse (lunar, solar, partial, annular or total and approximate duration) takes place, but because of the ⅓ day the track is moved westward about 120° in longitude.

Another eclipse cycle is the cycle of Meton discovered in the 5th century B.C. It is a cycle of 19 tropical years each with 365·2422 days and, although not so useful as the Saros, is of interest in that eclipses occur in the same part of the sky, and also because it is the basis of the rule for finding Easter.

In a solar eclipse totality never exceeds 7 minutes 40 seconds and is usually much less. The width of the zone of totality averages less than 100 miles but may be about 167 miles when the sun is in the zenith. A rather rare type of solar eclipse occurs about twice in a Saros and is called annular total. The eclipse begins and ends on the horizon when the moon is not quite large enough to cover the sun. In the middle of the track the eclipse takes place higher in the sky and for a short time is total. Such eclipses were, in April 1912, just total in Portugal, and in April 1930, just total in California.

The most extensive work on the prediction of eclipses is by Ritter von Oppolzer, whose *Kanon der Finsternisse* was published by the Vienna Academy of Sciences in the 52nd volume of its *Denkschriften* in 1887. It contains the elements of all eclipses (8000 of the sun and 5200 of the moon) from November 10, 1207 B.C., in the Julian Calendar (to be precise, one should say 1207 in the Julian Period—a practically continuous measure of time invented by the 16th-century French scholar Scaliger) to November 17, A.D. 2161, in the Gregorian Calendar. These were calculated from the Danish astronomer P. A. Hansen's tables of the position of the moon published in 1857 at the expense of the British Government, and his French contemporary Leverrier's tables of the position of the sun. Modern German ephemerides (astronomical tables) are also based on Hansen's elements, whilst French, American and English ephemerides are based on the elements of F. W. Bessel, the German astronomer (1784–1846).

The next total eclipse of the sun after 1940 will be on September 21, 1941, visible in Central Asia, China and on the Pacific Ocean, and it may be favourably observed from the east coast of China.



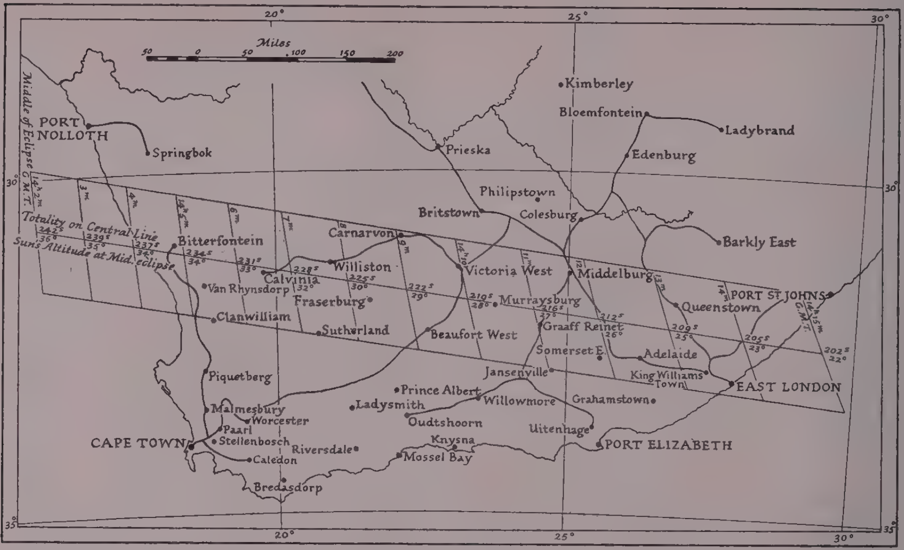
From the 'Nautical Almanac', 1940, and the American 'Ephemeris' *By courtesy of the Controller, H.M. Stationery Office*

The path of the Total Solar Eclipse of 1940 (October 1st)

In 1933 Dr L. J. Comrie published his calculations concerning this eclipse. He took the positions of the sun from Newcomb's tables, and those of the moon from Brown's tables (published by Professor E. W. Brown of Yale, to supersede Hansen's, in 1923), applying slight corrections. Eclipse calculations are published in the *British Nautical Almanac* for 1940, in a special supplement from the same source, and in ephemerides by the appropriate authorities in U.S.A. and other countries.

THE TRACK OF THIS YEAR'S ECLIPSE

The central line of the eclipse track begins in Colombia, South America, immediately to the east of the Andes. It passes through the extreme south of Venezuela and into Brazil, where it runs nearly parallel with the coast line. According to Comrie's calculations the line passes out to sea just north of Recife, Pernambuco. After crossing the Atlantic Ocean it crosses South Africa just south of Bitterfontein, north of Calvinia, and directly through Murraysburg. The total eclipse will be visible in an area stretching for about 60 miles to the north and 60 miles to the south of this line. On the eastern coast of



By courtesy of Dr L. J. Comrie from 'Monthly Notices of the Royal Astronomical Society', January 1933

The detailed totality track over South Africa of the solar eclipse of 1940 (October 1st) as calculated by Dr L. J. Comrie. The numbers refer to the central part of the track, the middle ones giving the Greenwich Mean Time of the occurrence, the upper ones giving the duration of the eclipse and the lower ones giving the height of the sun above the horizon at the time of eclipse

Brazil, Cabadello will just miss the total eclipse whilst Parahyba will be in the umbra. Maceio will be outside the zone of totality also.

In South Africa the northern limits of totality are such that Carnarvon is just in and Port St Johns just out. In the south Clanwilliam and Jansenville are just out, Sutherland just in and East London well inside the area of totality. On land the greatest duration of the eclipse will be near Recife, where it will last for about 5 minutes at an altitude above the horizon of just under 60°.

It seems scarcely likely, in view of the very good tables of the positions of the sun and moon now existing, that anything will be learned concerning these tables from observations of the 1940 eclipse, but as finality is never obtained in such tables astronomers will pay attention to the point. For the 1932 (August 31) total eclipse Dr J. Jackson and the other astronomers present with the Greenwich Royal Observatory party to Parent, 252 miles north-west of Quebec, reported that notwithstanding the re-checking of the calculations at the office of the American *Ephemeris*, the observed time of second contact (beginning of totality) was 3 or 4 seconds late and totality lasted 99 seconds, not 102 seconds as computed, though both were possibly due to the form of the moon. It is known that tidal friction in seas such as the Irish Sea definitely slows down the rotation of the earth by *very small amounts.*

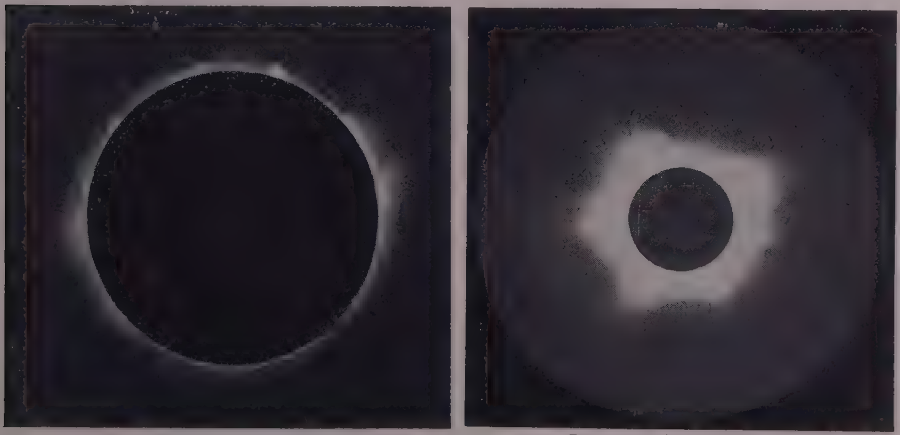
HOW SIMPLE OBSERVATIONS ARE MADE

Some eclipse observations may be made with the eyes directly, whilst others are better made with the 'eye' of a camera, to be studied at leisure in greater detail. Still other observations need apparatus specially constructed.

I will first discuss observations with the eye or with simple apparatus. In order to avoid damaging the eyes the eclipse should be viewed through a dark glass, preferably one of a neutral tint so that colours may be distinguished. Alternatively, with a small telescope an image can be formed on a plain sheet of paper and this viewed instead of looking directly at the sun, though it must be remembered that the telescope will have to be moved to keep pace with the movement of the sun.

A solar eclipse, of course, gives direct visual proof that the moon emits no light of its own, and, since the edge of the moon appears quite sharp, that the moon has no atmosphere. The moment the moon and the sun appear to osculate is called first contact. The moment when totality is reached is called second contact, and this is here the same as third contact (in an annular eclipse second and third contact are separated); fourth contact is just as the sun and moon appear to separate.

At partial eclipse the earth is not so dark as when clouds obscure the



By courtesy of the Royal Astronomical Society

(Left) *The Solar Corona taken during the eclipse of 1927 (June 29th) from Giggleswick in Yorkshire by J. Jackson. The Solar Prominences are particularly well shown shining through the Corona.* (Right) *The Solar Corona taken during the eclipse of 1936 (June 19th) from the island of Chios near Greece by R. L. Waterfield* sun, though as the eclipse becomes total the earth takes on an ashy or slaty purple appearance. It has been said that on certain occasions in the past at the time of eclipse practically complete darkness has ensued. Reports from recent eclipses, however, make it clear that it has been quite easy to read print and instruments during totality without any assistance from a torch. Astronomers usually carry a torch in case of necessity. Photographs of terrestrial objects taken with a definite exposure during and after an eclipse would illustrate the difference in the degree of darkness, or photometer observations might quite usefully be taken. If a white paper is held up to the sunlight just as second contact is approaching, the light sometimes appears to flicker across it. This may be due to unequal refraction in the earth's atmosphere and may be a similar effect to the twinkling of stars.

At the eclipse of 1936 (June 19) in Japan shadow bands appeared 47 seconds before second contact and were visible for 43 seconds. The bands were about ¾ inch wide with a separation of just over an inch. The wind was SW and the shadows moved SE to NW at a rate of about a yard per second. Just before the thin crescent of the sun, reddened at the cusps, disappears, it is sometimes observed to break up into two or more parts called Baily's Beads. A sharp lookout has to be kept for these as they are not always observed. They were first observed by Francis Baily at the annular eclipse of 1836 (May 15), and their disappearance is usually taken as the beginning of totality. As soon as this occurs an effulgence of soft light is seen to surround the sun. This is the corona, and its wonderful colour, structure, form and size are a pleasure to behold. It is often a faint red or delicate flame colour and appears to consist of fans, arches, petals, rays, domes and loops, the whole shot through with much brighter prominences from the deeper and now hidden parts of the sun.

The shape of the corona appears to be connected in some way with the approximate 11-year period during which the spots on the sun wax and wane. The extension of the corona is nearly always greatest in and around the sun's equator and least near the poles. A periodical change in compression can be traced, the compression being greatest when there are fewest spots on the sun, and least when there are most spots on the sun. Apparently the compression is usually great, but towards sunspot maxima the compression decreases gradually, being least at sunspot maxima, after which it *suddenly* increases.

This sudden discontinuity was strikingly illustrated by the interesting eclipse of 1918 (June 8) during which the form of the corona was of the maximum type on the west side of the sun but of the minimum type on the east side. At the same time the distribution of sun-spots on the surface of the sun was very unsymmetrical. The eclipse occurred just after sunspot maximum.

It is probable that the latest sun-spot maximum was in 1939 and it will be instructive to see whether or not the corona has attained its minimum form of great compression by the eclipse of 1940. During the period when the sun's light is shut off, the planets Mercury and Venus may be visible, and from time to time during eclipses search has been made for planets nearer to the sun than Mercury. Such a search was made on August 30, 1905, by the three parties from Lick Observatory stationed in Egypt, Spain and Labrador. None was found. Many have remarked that at the moment of totality a cold wind springs up and the air becomes chill. As a mercury thermometer reacts too slowly to a quickly changing temperature, a thermocouple, which acts on the same principle as the device for measuring the temperatures of furnaces, has been used. This showed that the fall in air temperature was only about 1½ degrees centigrade, and it is suspected that if there is any great fall in temperature it must be a fall in radiation temperature. Finally, just as totality ends the shadow bands may be observed again, and the moon passes on to fourth contact.

THE PLANNING OF ADVANCED OBSERVATIONS

Observations on a more advanced scale are very costly. Observatories often pool their resources, and shipping companies, the army, navy and local residents are normally most helpful with the transport of the heavy and bulky apparatus and with the necessary arrangements. In the British Isles, the Joint Permanent Eclipse Committee centralizes the arrangements. The phenomena to be observed during the few minutes of eclipse, and the site to be used in view of the local transport facilities, topography, weather conditions, location of other parties and a hundred and one other things, must be chosen with care and deliberation.

The eclipse party needs to be in its place more than a week before the eclipse to set up the instruments, re-silver the mirrors if necessary, make arrangements for the avoidance of dew and the effects of extremes of temperature, for running water at the correct temperature for the development of plates, and for the drying of them. It appears likely that in future eclipse expeditions many of the mirrors including the coelostats (large mirrors which receive light from the sun, rotating slowly in order to keep the beam shining always into a fixed telescope) will be made of Pyrex so that they will not alter their figure with variations of temperature, and aluminized instead of silvered, as this is more durable and well adapted for photographic use.

Then photographs of star fields must be taken for comparison, and the whole procedure to be followed by each one of the party during the few precious moments thoroughly rehearsed several times so that not a moment is wasted.

During the actual eclipse all present work with the precision of a well-trained gun crew. All the apparatus is in the correct place, ready and focussed, and the coelostats are working. One man is watching intently for the instant of second contact when he begins to call out seconds loudly, taking his time from a metronome or watch.

Everyone present knows what he has to do on certain numbers being called. One astronomer stands by the camera attached to the end of a huge telescope. On hearing a particular number an assistant on his left hands him a plate. He puts it in immediately and leaves it there until another previously arranged number is called. He then takes it out and hands it to another assistant on his right, who puts it in a prearranged place. All works smoothly.

After the eclipse the party usually stays on for a few days, taking further photographs for comparison and developing the plates. The examination and measurement of the plates, together with the calculations, often takes months at the observatories.

For the eclipse of 1940, the Joint Permanent Eclipse Committee had arranged four expeditions from this country to South Africa and one to Brazil, but the outbreak of war necessitated the cancellation of all these. Some apparatus has been sent to South Africa, however, for use by a joint party from H.M. Royal Observatory, Cape of Good Hope, and the Radcliffe Observatory, Pretoria. The observations will include the measurement of the Einstein displacement by two different methods and observations of the change in line contours of the Fraunhofer lines (dark lines in the sun's spectrum discovered by the German optician, Fraunhofer, born in 1787) near the edge of the sun. For the latter, which is of importance in the study of the outer layers of the sun, the slit of the spectrograph will be guided on the moon's advancing limb and a series of rapid exposures will be made with a specially constructed moving-back camera.

Other useful observations which might be made during the eclipse, possibly from a different site, are with radio echoes to test the effect of the eclipse on the earth's ionosphere, *i.e.* the upper layers of the earth's atmosphere. This might help to form a judgment of the respective validity of the two hypotheses concerning the cause of the ionization (neutral solar corpuscles or ultraviolet light).

Sir Isaac Newton in his *Optics*, Query 30, suggested that light and matter might be converted one into the other. Light and matter are now known to have many properties in common, and according to Newton's 'Law of Gravitation', light in passing our sun should be deflected by an amount equal to 0·87″ multiplied by the radius of the sun and divided by the distance of the star from the centre of the sun. Now according to the 'General Theory of Relativity' propounded by Einstein in 1915 the deflection should be about twice this amount. These quantities are so small that it requires the utmost skill on the part of instrument-makers and on the part of observers to measure this deflection. Moreover, in order to measure it, the sun must be eclipsed before a background of sufficiently bright stars which are clustered round it, preferably within 2° or 3°.

For one reason and another up to the present only one eclipse has furnished good results. This was the eclipse of 1919 (May 29). Observation parties were arranged in hope during the dark days of November 1917, Sir Frank Dyson, at that time Astronomer Royal, and Sir Arthur Eddington being chiefly responsible. The late F. A. Bellamy at Oxford took photographs of the eclipse field in Taurus and the check field. At Principe in Africa, Professors Eddington and Cottingham got eclipse photographs, as did Mr Charles Davidson and Dr A. C. D. Crommelin (both of the Royal Observatory, Greenwich) at Sobral in Brazil. From these, and results by American and other expeditions, it appears that the displacement is equal to or slightly greater than Einstein's predictions. It is hoped that more results will be obtained by the various expeditions during the 1940 eclipse.

THE OUTER LAYERS OF THE SUN

The sun has a diameter of about 866,000 miles. The lower layers of the atmosphere surrounding this, to a depth of some thousands of miles, constitute the chromosphere, so called by Sir Joseph N. Lockyer (1836–1920) because of its bright-red appearance to the naked eye, and in turn the lower hundreds of miles of the chromosphere is called the reversing layer. Around all this is the tenuous corona, which is the outermost portion of the sun's atmosphere, hundreds of thousands of miles high.

An eclipse is an especially convenient occurrence for enabling observations of the reversing layer, chromosphere and corona to be made without the interference of the light from the interior of the sun. Light from whichever is being studied is made to impinge on either a prism or diffraction grating (glass or speculum metal with tens of thousands of parallel lines to the inch) which have the power of sorting the light into its constituent colours. An analysis of the colours, which are usually photographed, tells us about the constitution of the source, and the material through which the light has subsequently passed. The presence of so small a quantity as one three-millionth of an ounce of material producing or absorbing light may be detected in this manner.

It is now well known that Lockyer discovered helium in the sun before it was discovered on earth, and this element extends to great heights in the chromosphere. Other prominent elements are hydrogen, potassium and positively electrified calcium. Just at second contact, colours normally missing in the solar spectrum (Fraunhofer lines) flash out brightly from the reversing layer to make the 'Flash Spectrum'. 'Enhanced lines' make this not entirely a reversal of the Fraunhofer spectrum, and it was suggested in 1920 by Professor Meg Nad Saha, of Calcutta, that the extra brightness of these lines was due to electrification influenced by pressure as well as temperature.

The lower parts of the corona nearest to the sun do emit some light, but for the most part the corona is only illuminated by the light from the hidden sun at an eclipse. To the naked eye it is reddish in colour, but the coronograph is able to split up this mixture of light, and it is then seen to contain a multitude of separate colours, including one important bright-green line once thought to be due to a new element and called 'coronium'. Professor H. H. Turner, at the eclipse which he observed in Egypt in 1905, showed the coronal light to be partly polarized (light waves vibrating in one plane instead of in all directions as usual), showing that the corona consists in part of solid particles like dust. Some of the particles may be smaller than this, and the matter is not yet definitely settled. From 10 to 20 minutes of arc from the surface of the sun the Fraunhofer coronal lines exhibit a red-shift, indicating that the coronal particles are moving outwards with a speed of about 12½ miles per second.

In July 1931, at the Observatory of the Pic du Midi in the Pyrenees, M. Lyot, of Meudon Observatory, Paris, was able to take the first photograph of the lower corona without an eclipse by using a very ingenious and accurately made new coronograph, but the outer regions of the corona which are farthest from the sun are still only seen at the time of total eclipse.

STUDYING THE EARTH'S UPPER ATMOSPHERE

About 62 miles above the earth is what is known as the Kennelly-Heaviside layer, so called after its discoverers, (layer E) which reflects radio waves and thus enables wireless messages to be sent round the world instead of shooting off into space. It does this because it is electrically charged or ionized, and contains over a million electrons to the cubic inch by day and about two hundred thousand by night. Above this is the Appleton layer, discovered by Professor E. F. Appleton (Layer F). Radio waves of a critical frequency will pass through layer E and be reflected by layer F, showing the latter to be at a height of about 185 miles. Everyone who uses a long-distance radio receiving set knows that better results are obtained at some times than others; this is due to the variation in height of the reflecting layers and the degree of their ionization.

The sun is probably the cause of the ionization, but how it is done is still a mystery. Professor Sydney Chapman suggested in 1931 that the upper ionized layer is ionized by ultraviolet light from the sun, whilst the lower layer is ionized by small unelectrified particles shot out by the sun. To test these and other suggestions, H.M. Nautical Almanac Office has worked out the time and place of the ultraviolet and corpuscular eclipses (speed of corpuscles taken as 1000 miles per second) at heights of just over 62 miles and just under 186 miles, so that observations may be made. We also have some indication of the way we should expect the eclipses to alter in time and place according to the variation in height of the layers E and F and the speed of the neutral solar corpuscles which is not yet definitely known.

Professor Chapman has suggested that in an eclipse the corpuscular shadow at the earth would have a normal sectional area of about 1600 miles diameter, little less than the diameter of the moon itself, and that the area of the surrounding half shadow would be practically negligible. Further, if the ionization of the lower layer is due entirely to corpuscles, the ion content of the layer would be least at the end of the corpuscular eclipse, whilst if the ionization be due entirely to ultraviolet light the reduction would be greatest about 15 minutes after totality. With critical frequency and echo experiments in several places affected by the eclipses, some idea should be formed concerning the relative merits of the rival theories, and also much useful dimensional information obtained.

Afghanistan in Transition

by ANNEMARIE CLARAC-SCHWARZENBACH

Afghanistan is of particular interest at this moment. For, geographically, it is a 'land of transit', poised as a buffer State between more powerful neighbours—a nerve-centre of world politics. And yet, as the author of this article saw for herself when recently travelling through it, it has completely preserved its own character. Still among the least developed of Asian countries, its population, of many races and many tongues, are only now beginning to adopt the ways of the faster moving modern world

In Kabul, a bare day's journey from the Indian border and the motor road through the Khyber Pass, it is impossible, owing to the rules of Mohammedan law, to buy a bottle of beer in any of the shops; guests at the only hotel are forbidden to ask for alcoholic beverages, and a physician's prescription must be presented to obtain pure alcohol from the chemist. For the same reason Afghan medical students at the new University of Kabul, staffed for the most part by Turkish instructors, are sent to India to complete courses in anatomy and dissection.

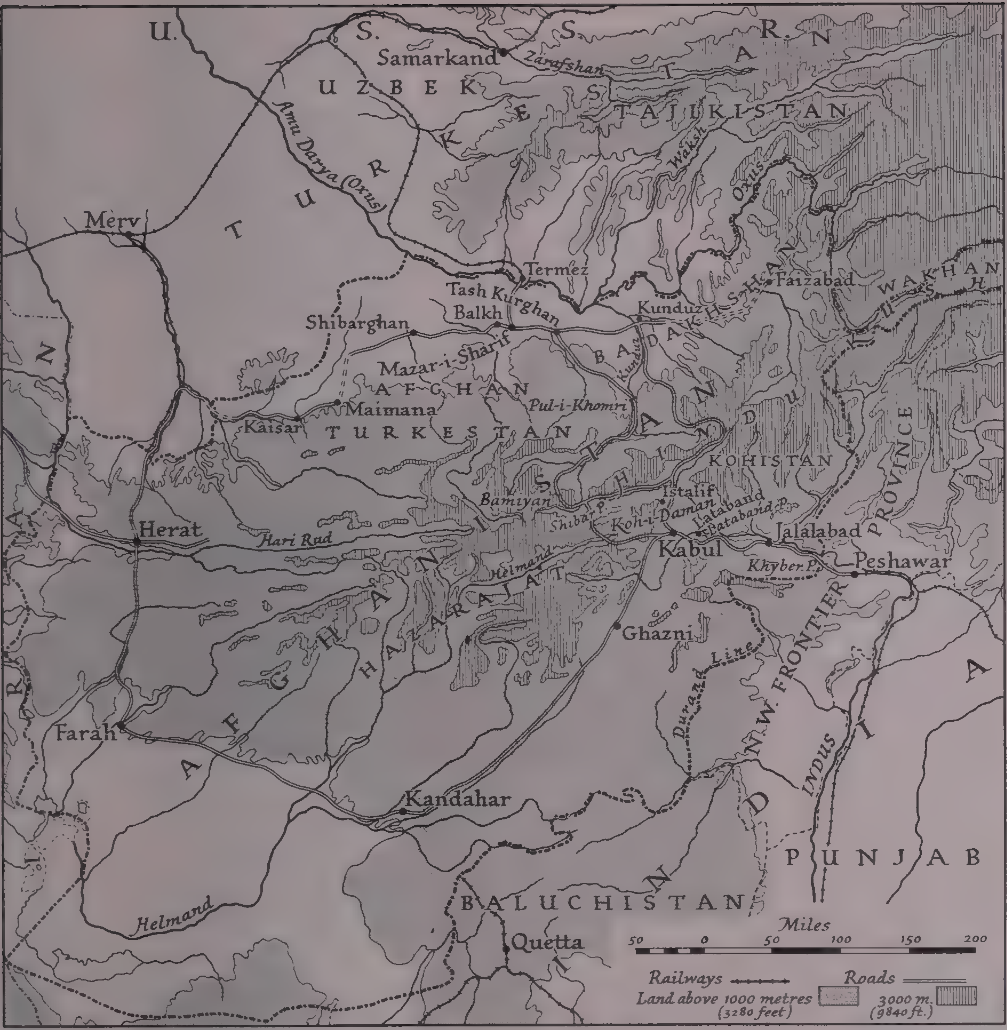
In Afghanistan, the traditional buffer state between Russia and British India, the highways for the most part follow the track of the age-old caravan routes —the roads of invasion and migration. Of these, only three or four are available for motor traffic: the road from the Iranian (Persian) border by way of Herat, Kandahar and Ghazni to Kabul, over an immense, monotonous stretch of desert; the road from Kabul across the Lataband and the beautiful plain of Jalalabad to the Khyber Pass; the Hindu Kush road, famous for its scenic grandeur, which connects Kabul with Mazar-i-Sharif, the capital of Afghan Turkestan, and branches off beyond the Shibar Pass into the highlands of Bamiyan, home of Buddhist cave monasteries and colossal statues; and at a pinch the 'Highway of the North', still under construction, which is to lead from Herat by way of Maimana and Balkh to Mazar-i-Sharif, following the old silk trail.

From Mazar it is possible to drive to Termez, on the Russian boundary formed by the Oxus, where the Soviet railway ends. Again, if one is willing to risk ruining one's car, one can drive into the province of Badakhshan as far as Kunduz and even Faizabad.

As far as I know, only one European tourist has so far succeeded in travelling by car from Bamiyan across the mountain country of the Hazarajat to Herat; but this stretch was traversed in the summer of 1939 by a young French couple on bicycles. In the highland villages they often found that there was no bread, milk or matches. For days they lived on flour stirred with a little water, and transported their own fire, kindled with the help of a camera lens, in a tin filled with sheep-dung suspended from the handle-bars of a bicycle.

Afghanistan is about one-half again as large as France. But it has only about three thousand motor-lorries on its roads and a far smaller number of private cars. Petrol is more expensive than in India and Iran. North of the Hindu Kush it is imported from the Soviet Union; in the rest of the country it is brought in by the Burma Shell Company through India. The handful of repair-shops in Kabul, Kandahar and Herat are government-owned, as are the hotels, controlled by the postal authorities, which are used by the rare tourists and by travelling officials.

There used to be an air service between Tehran and Kabul run by the German Lufthansa, which was experimenting with the overland route to the Far East and a feeder line to the 'Eurasia' route. But the Iran-Afghanistan line ceased operations in the summer of 1939, just before the outbreak of the war. A



Soviet plane travelling roughly once a week between Tashkent and Kabul carries diplomatic mail, but only exceptionally passengers. There are no railways in Afghanistan, and exploitation of the country's rich natural resources — the presence of oil has been established beyond doubt — is hampered by lack of transport facilities.

Right in the Hindu Kush, near Pul-i-Khomri on the Kunduz River, German engineers of the Siemens Company are building a dam and a hydro-electric power plant, the current from which is to drive a cotton mill and a sugar refinery. The machinery, imported from England, must be shipped five hundred miles by lorry from Peshawar across the Khyber, Lataband and Shibar Passes! Outside Kabul, this power plant is the first large-scale industrial undertaking in Afghanistan, and the five thousand workers engaged in its construction are the first specimens of a new 'proletariat'—a term hitherto unknown in Afghanistan. In the projected workers' city of Pul-i-Khomri, planned for ten thousand inhabitants, nomads are to be settled and introduced to factory

Ella Maillart

Afghanistan is still a country of yurts *and black tents. This nomad woman with a roman profile belongs to a tribe whose summer pastures are near Bamiyan. In winter it returns to the Indian border*

work—a first step in the programme of permanently settling the nomads.

For Afghanistan, though on account of its geographical position a real nerve centre of world politics, is still one of the most undeveloped countries of the Near and Middle East. A neighbour of Russian Turkestan with its collective farms and new factories, Afghanistan still remains almost entirely agrarian. A neighbour of British India, separated from a region long under British administration only by the mountain strip of the 'Tribal Territory', Afghanistan is only now making the transition from a country governed by tribal tradition and feudal law, to a modern state with a strong central government. A neighbour of Iran and of Russian Turkestan, two regions where the nomad problem has been solved by radical measures, Afghanistan is still a land of *yurts* and black tents. Surrounded by countries where the power of Islam is either on the wane or has had to reorient itself in view of its separation from secular affairs, its loss of influence over government, education, etc., Afghanistan has remained a purely Mohammedan land, where religion is more than the private concern of the individual. The beginning and end of Ramadan, the month of fasting, are proclaimed by the Government in Kabul. Throughout the country missionary work is prohibited and the only Christian church in Afghanistan is the little chapel in the Italian Legation at Kabul.

The integral force of the Mohammedan religion represents a gain as well as a burden to the Central Government in Kabul. In a land inhabited by different

A. Clarac-Schwarzenbach

The people have a strong national feeling although they are composed of different ethnic and linguistic groups. A Kirghiz shepherd from Herat who belongs to a small group of Turkish descent races speaking different tongues Islam is a strong unifying bond. Pushtu-speaking Pathan tribes in the South; Iranian Tajiks in Badakhshan, and Kohistan; Turko-Mongolian Uzbeks and Turkomens in Turkestan; Mongoloid Hazaras settled in the central mountains by Genghiz Khan — all these ethnically and linguistically differing population-groups, which show marked differences in their modes of life: nomads and settled peasants, professional warriors and city merchants—all these are united not so much by a common national feeling as by a common faith. The Government has shown shrewdness in utilizing this instrument. But it is more than an instrument—it is a power which may at any moment emancipate itself again and become effective along wholly different lines.

During the last war German and Turkish agents attempted to stir up the warlike Pathan tribes of India's North-West Frontier to 'Holy War' against India—that is to say, against Great Britain. But the shrewd Emir Habibullah knew that taking up the cause of Turkey and Germany would be sheer madness so long as Russia and Britain were allies and could crush Afghanistan. The young ruler Amanullah who came after, allowed himself to be swept into war—and lost. But in his support, the tribes of the entire region, on both sides of the Durand Line, rose up in arms. Tribal solidarity and the bond of Islam proved far stronger than loyalty to the Governments of Delhi and Kabul. Today, as much as ever, control of the restless, warlike and fanatically religious border tribes is a common problem for both Governments which can be solved only by cooperation.

J. C. A. Johnson

A group of settled peasants, Afghans proper, or Pathans, outside one of their scattered villages

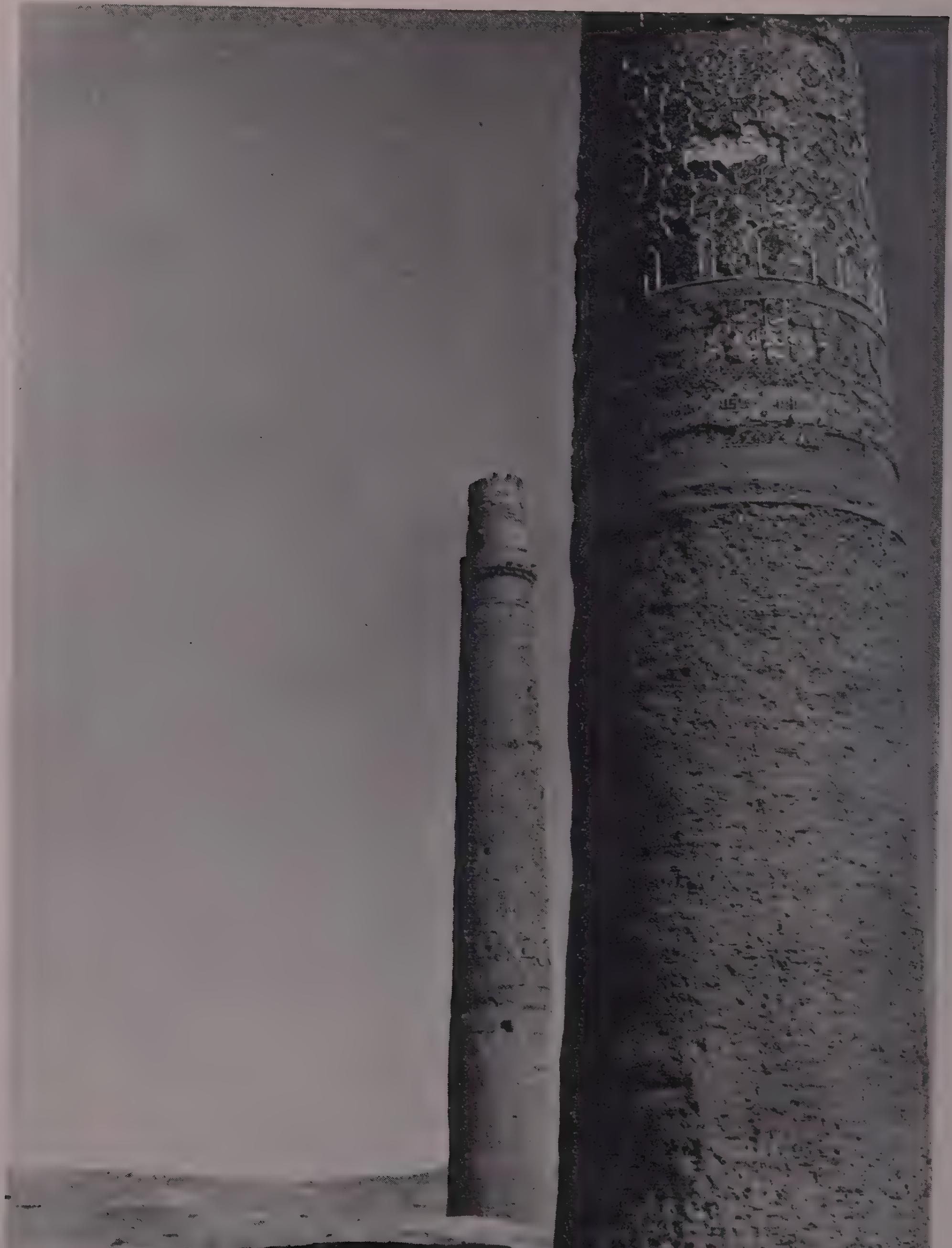
A. Clarac-Schwarzenbach

The power of Islam is a force for uniting all races. This picture, taken near the Hindu Kush road, at the Shibar Pass, shows a religious assembly on the last day of Ramadan

Amanullah's over-zealous and precipitate reforms were wrecked by the resistance of the Mullahs. The power of Islam cost him his throne. The present Government at Kabul, while utilizing religion as a unifying force, has at the same time to take this power into consideration in all its actions. This explains why Afghanistan has not yet taken the first step towards the emancipation of women since the Government are well aware of the danger latent in a policy of too-rapid reform.

Afghanistan is developing slowly and this is not to its disadvantage. The shrewd men who rule it—men of European schooling who are yet bound with every fibre to their country and its traditions and life,—are able to utilize the experience of other Asiatic countries and to avoid tragic mistakes. I am thinking of, for example, the 'settlement of the nomads', a problem that will inevitably arise in Afghanistan, but that surely can be solved in a happier and more humane fashion than it was in the neighbouring regions of the Soviet Union and Iran. Life in Afghanistan is still of such simple integrity and harmony that to us Europeans it seems almost like paradise.

There is an enormous difference between the customs of Afghanistan and those in other countries of Western Asia, notably Turkey and Iran. One does not know Asia until one has passed beyond the north-east frontier of Iran—though the Iranian highlands afford great vistas of Asiatic desert, full of colour and splendour; while Iran, of course, is infinitely richer in architectural monuments and art treasures than mountainous Afghanistan, which is poor in cities and inhabited mainly by



Ella Maillart

The giant minarets of the Musallah, one of the most splendid mosques of Asia, still stand on the outskirts of Herat—a reminder that this was once the capital of a great empire warlike tribes. In Herat alone, the capital of Tamerlane's Renaissance, can one speak of an 'urban civilization', a type of culture reserved to settled populations, thriving only where there is wealth. But in Herat the last minarets of the Musallah that remain standing, and the surpassingly beautiful mausoleum of Gohar Shad, easily bear comparison with the structures of Isfahan and even Samarkand.

Herat stands on the watershed between two worlds—the highlands of Iran and the Turanian lowlands—and it is one of the most important cross-roads of Asia. Here the roads to Iran, to India, to Central Asia diverge, nor is it chance that has made Russians, Persians, Afghans and Englishmen woo the city. It was never an uncontested Afghan possession, and today it stands like a symbol of the character of Afghanistan—a land of transit having until recently little history of its own but always reflecting the reactions of its great neighbours; an Asiatic Switzerland, the natural rampart between other parts of Asia and the gate of invasion into India. It is all the more surprising that it is precisely the "Land of Koh betwixt Iran, Turan and Hind"—as the classical authors described it (Turan being their name for the country north and east of the Oxus) —which has most completely preserved its own character.

In the 19th century Britain might well have found a different solution to the problem of protecting India. It might have made of Afghanistan, the bulwark against Russia, a protectorate—and this doubtless was the intention during the first two Afghan Wars. This, no doubt, would

J. C. A. Johnson

The 3000 or so lorries using the roads are the only means of transport: even pilgrims to the holy city of Meshed travel this way

J. C. A. Johnson

The White House, Kandahar, where the Afghan Governor lives. The town is an important trade centre

have spared Britain its present form of frontier problems. For the tribal region which today lies on both sides of the Durand Line marked out in 1894 would then have come under uniform administration. Today the tribes flit across the border, support and protect each other, and easily evade all government authority. A buffer state fills a useful rôle only if it is strong and independent. If Britain changed its policy toward Afghanistan soon after Sir Frederick Roberts's victory at Kandahar and is today interested in a strong and independent Afghanistan, that country owes this fact to the undeniable virtues of its tribes, their warlike qualities, their patriotism, and their strongly developed sense of liberty. As subjects or wards of a foreign power they would have remained restless elements. As defenders of the freedom of their country they deserve admiration and confidence.

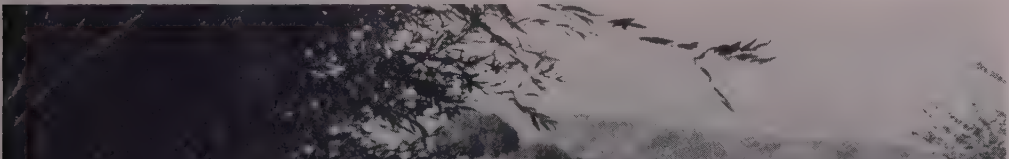
Afghanistan has thus never even been a 'sphere of influence' in contrast to old Persia, which, as is well known, was before 1914 divided into a British and a Russian sphere of influence and did not experience a national rebirth until the advent of the present Shah Reza Pahlevi. Without any change in its political significance—which today once more has moved it into the focus of current events—the Asiatic mountain country of Afghanistan has survived invasion after invasion, and retained its character. Therein may lie the charm which it exerts upon us today, though the number of tourists, scientists and journalists who have penetrated beyond the Khyber Pass or the Iranian border to visit Afghanistan is still small.

For here we see an Asiatic country

that has lived in contact with its neighbours and has stood in the arena of world politics since Alexander's Indian campaign, being drawn towards assimilation of Western forms of civilization. It is not a question of whether we regard the transition as progress or adopt a sceptical attitude towards its merits in so far as they are likely to contribute to the happiness of the people. The East cannot at choice turn a blind eye to the technical achievements of the West—for it is the inevitable advance of science which renders the isolation of any part of the world impossible.

When, today, one compares an Afghan village—say, the potters' village of Istalif, nestling in a flowery oasis on the hillside—with a suburb or workers' settlement in Europe; or the peace of a nomads' highland valley in the Hindu Kush with the terrors of war that visit our own countryside; then more than a doubt of the value of our civilization and the superiority of our scientific technique will arise. Nevertheless, Afghanistan is not immune from being swept into the whirl of events through, let us say, a Russian invasion of its northern provinces. And beyond doubt the potters and weavers of Istalif will sooner or later be faced with the competition of ceramic factories and cotton mills.

Today there is still a fund of indigenous life in Afghanistan, manifesting itself in everyday customs, in traditions and in simple virtues which strongly attract us Europeans. Will this integrity and harmony vanish, as the black tents of the nomads will vanish? Will the process of 'modernization' in this strange and beautiful land between the Soviet Union and British India necessarily be a tragic one? Or are forces present, have experiences

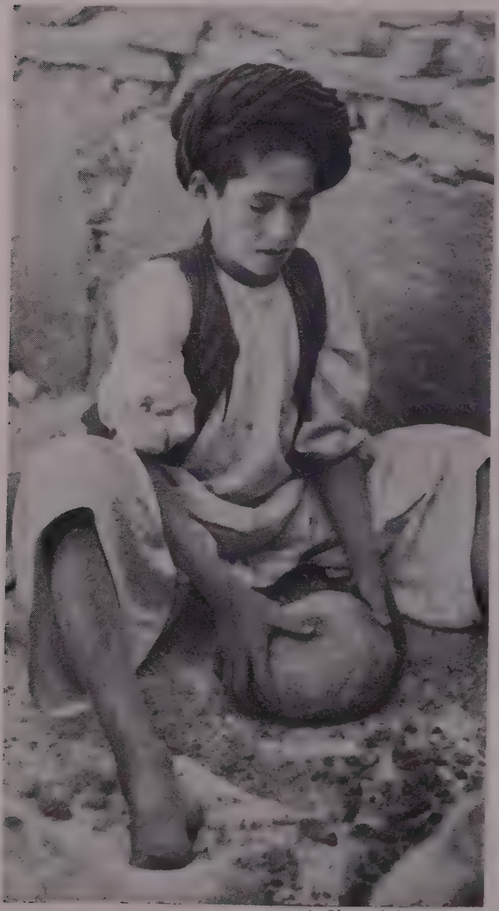


A. Clarac-Schwarzenbach

Istalif, well known for its pottery, glazed in a bluish green colour. Such pottery is used in every house in Afghanistan, as well as cheap Russian and Japanese teapots and bowls been gathered, which will make it possible for the country to absorb the advantages of Western achievement while avoiding their disadvantages?

Take, for example, Afghan hospitality, experienced by every traveller who knows more of Afghanistan than the main highways. During a trip from Herat through Turkestan to Mazar-i-Sharif my friend and I never once had to pitch our tent or cook our own rice and porridge.

Governors and village mayors received us each noon and each evening. At bad places on the road we found peasants summoned who greeted us, not like muttering serfs, but with genuine warmth, pushing our Ford up steep inclines, through rivers and across sand-beds. Wherever we halted in the shadeless heat a peasant would generally appear and come striding across the field, a few melons under his arm which he offered us as a present.

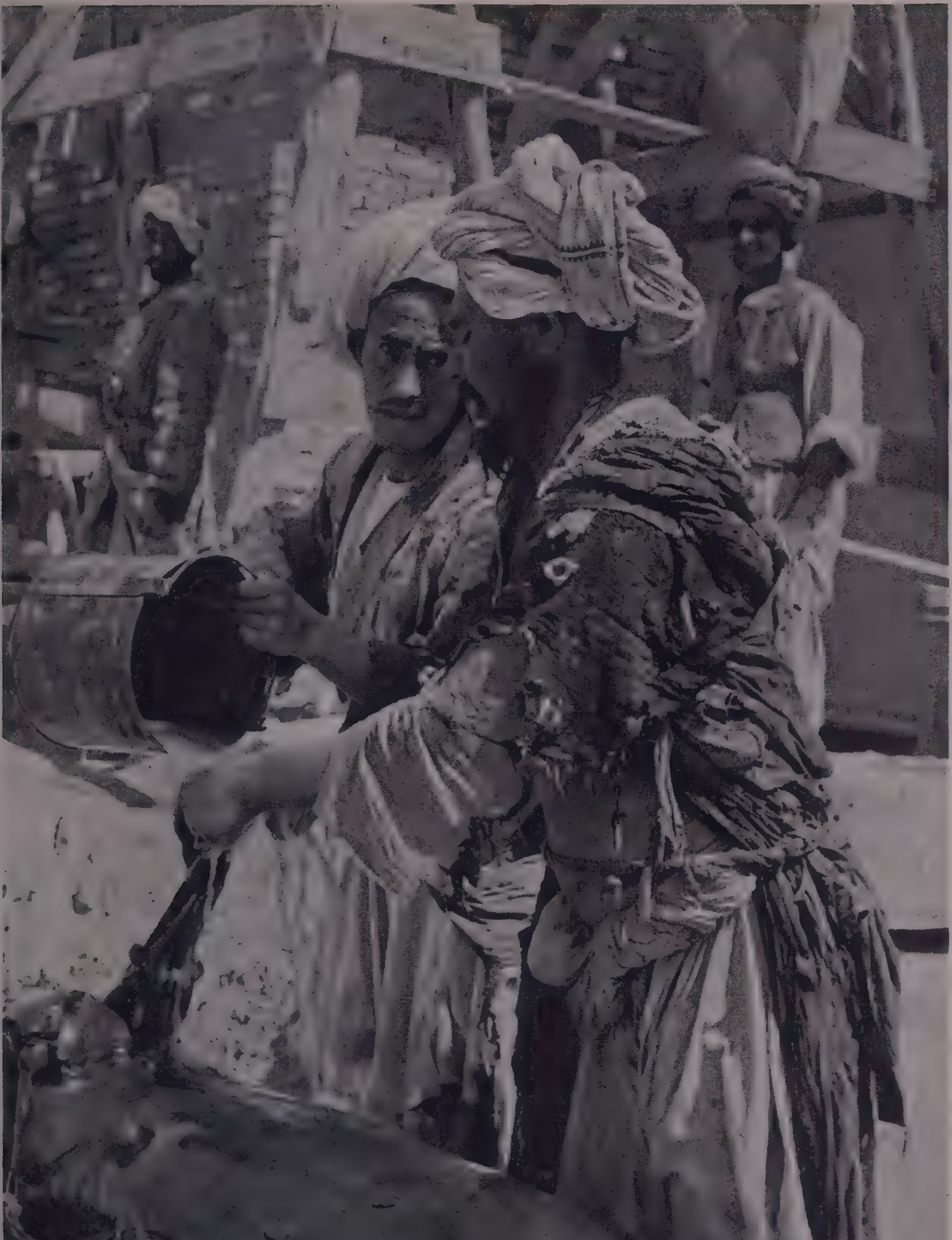


A. Clarac-Schwarzenbach

An Istalif potter's son, learning his trade: smashing stones from which colour is prepared. Will he grow up to face the competition of a ceramic factory, or become a factory worker himself?

Once, late at night, we were stuck in the oasis of Tash Kurgan with two tyres that had burst with the heat. We were unable to complete the repairs and for a long time could not find a soul, until a young peasant passed by, shovel on shoulder. When he had grasped that we, two girls without male companions, needed help, he was beside himself with amazement and insisted on conducting us to his little garden and offering us his protection.

We could not have felt more secure in Abraham's bosom than with our Afghan hosts. One evening about nine o'clock we stopped in the township of Shibarghan and asked a policeman in a little bazaar where we might spend the night. He jumped onto our running board and conducted us across field-paths to a huge, walled quadrangle, enclosing the garden of a seemingly wealthy man. The servants who opened the gate exhibited no surprise. We were led inside, where the lord of the manor in a soft silk robe and white embroidered cap sat on rugs on a raised clay terrace, enjoying the evening coolness with his friends. We removed our shoes and joined them. Within a few minutes young, white-robed servants brought green and red tea, and then skilfully proffered jug and basin for us to wash our hands. When we had recovered a little, pilav was served—deliciously seasoned dry rice with boiled chicken and lamb, with several kinds of vegetable, meat-balls, eggs and quince preserves as side-dishes. As we ate, the servants cut up melons and brought several varieties of grapes and peaches as dessert. Our host meanwhile quietly con-



A. Clarac-Schwarzenbach

A new era in Afghanistan: at Pul-i-Khomri nomad tribesmen are pressed into factory and building work. They still use a sheepskin as water bag as they did when they lived, free, in their black tents

A. Clarac-Schwarzenbach

Unveiled only at home, this Afghan girl has never been outside the village of Kaisar where her father is mayor. On the right are the children of an Uzbek servant of the house

tinued his conversation with his friends, now and then drawing at the hookah which made the rounds, and was as pleasantly serene, friendly and gracious as only a complete man of the world could be.

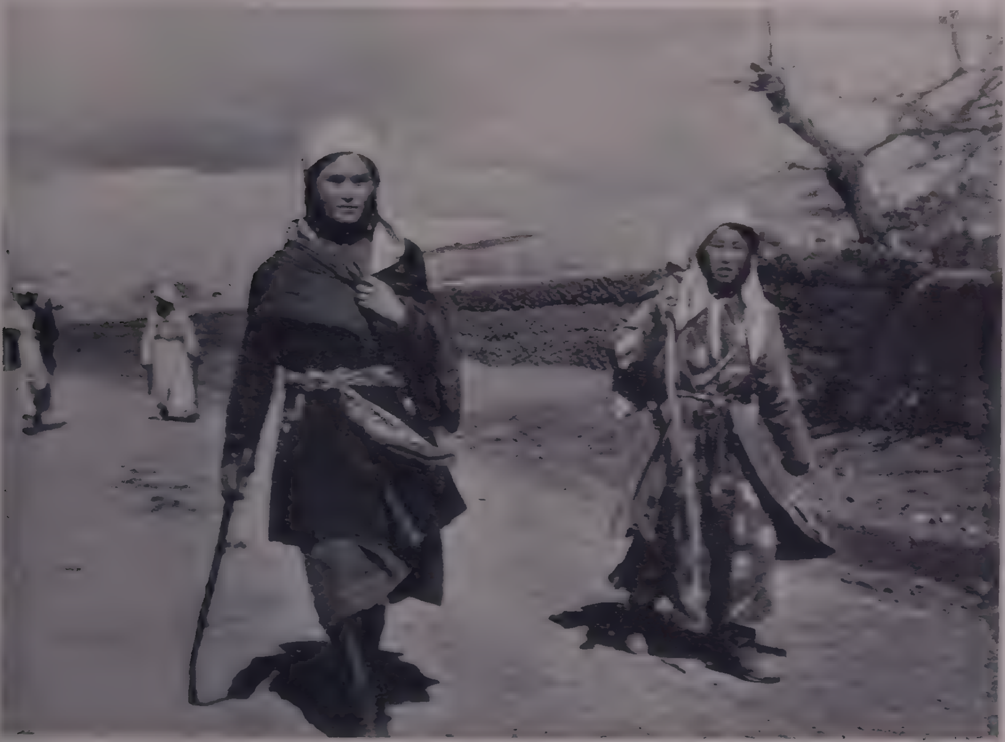
When we were tired, he beckoned to waiting servants who spread out silk mattresses and cushions for us. Just as I was falling asleep I saw our host rise once more. It had grown noticeably cooler. In the white moonlight the garden seemed to lie enchanted under the high starry vault. There was imperturbable tranquillity. Our host came towards me, spread a quilt over me and went to lie down again.

I often think that the nights under the open sky, in the great light-filled calm of the mountain valleys and the oases on the desert rim, are like a cult to the Afghans, ever permitting them to win new and pure strength from close, direct contact with their land.

Our host at Shibarghan was unmarried. We learned the next day, which we spent still in his garden, that he was a large landowner and breeder of karakul sheep. Though he was evidently very wealthy and belonged to one of the country's first families, he led a simple rural life and dealt with his numerous servants, gardeners and grooms in a friendly, patriarchal way. They were not paid subordinates, but members of his household.

In Turkestan, in the little village of Kaisar, we finally had an encounter with Afghan women. The Hakim, or village mayor, a Russian-speaking giant who received us at noon, to our agreeable surprise led us to the women's part of the garden, where we were met by his daughter and daughter-in-law, unusually beautiful girls, dressed in European style. The mother, too, was a beautiful and evidently intelligent woman who received us with natural graciousness and self-assurance, though she surely could not have encountered many strangers in her life. The Hakim and his family were Afghans. The servant girls, on the other hand, who prepared tea and pilav in the garden, were all Uzbeks or Turkomens. The meal was taken separately. We ate with the mother at a table set in European style. At the same time the daughters and grandchildren ate their pilav with their fingers, sitting on rugs spread on the floor. Afterwards the servants and their children ate the remnants, off to one side.

As we rested on silk-covered mattresses under great trees in the garden, the girls asked us whether we could send them fashion magazines and brought us some silk fabric which they asked us to cut out for them. I told myself that they had never seen the world outside their garden wall except through the barrier of the unbecoming veil Afghan women wear: the *chadur*. In the byways of the bazaar these same girls, whose beautiful fresh faces here met us alert and joyous, became shadowy creatures, half-blind and in constant fear and ignorance. Some day, one may be sure, a most harmonious form of family life will vanish with the harem walls and the chadur, and the 'emancipation of women' will lead to problems of which the Afghan woman does not even dream today. The limited existence which these

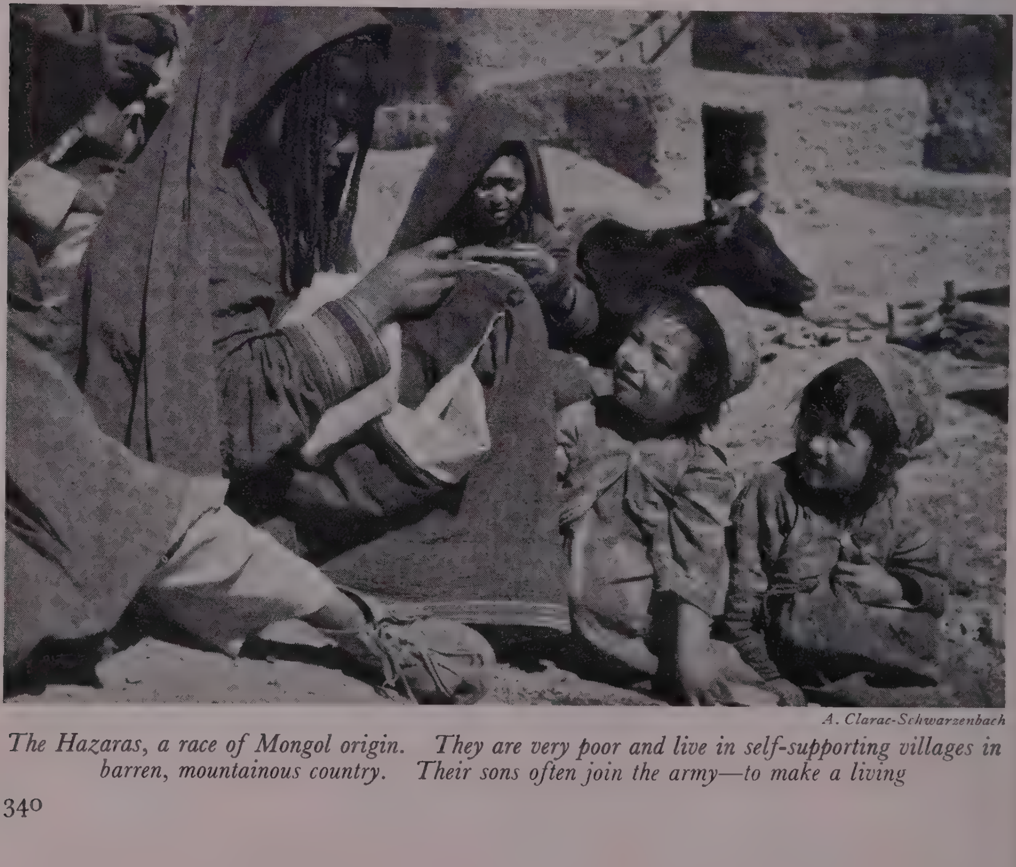


Turkomen women, who go everywhere unveiled: their fat, wrinkled faces are often wreathed in smiles which completely hide their slit eyes and tiny flat noses. They dress in bright colours and black Russian boots women still lead is unworthy of so vital and intelligent a race.

It would be too easy, after a sojourn of six months in an enchantingly lovely and idyllically remote land, to be seduced into describing its simple and harmonious life as ideal, and every one of the inevitably advancing changes as a misfortune. A person more familiar with Afghanistan might point to the fact that a great part of the population, which numbers about ten millions, lives in poverty. Pilav and lamb roasted on a spit are the daily fare of the rich. But in the tents of the nomads a sheep is slaughtered only on festive occasions. Rice is too expensive. Flour and *mast*, a kind of curdled milk, are the staple diet. In the settled peasant villages a kind of bread is prepared in the autumn from raisins, nuts and flour. This is preserved for the winter. In the walled, fortress-like *kalehs* (castles) of the Hazaras in the Hindu Kush, such as those near the Shibar Pass at a height of some ten thousand feet, there is often stark need during the mercilessly cold winter months.

True, the land is rich in fruit and almost everywhere there is good bread, vegetables, and mast; and a frugal mode of life agrees so well with this virile and merry nation of peasants and nomads that one thrills time and again at the sight of its proud, tall, strong, graceful sons. Yet it must be the concern of the Afghan Government to increase the country's welfare, to exploit national resources and to open up sure avenues of wealth to the people. This process is in full swing.

One of my most curious impressions was a visit to the town of Ghazni, which lies in the south between Kabul and Kandahar and looks back on a glorious



A. Clarac-Schwarzenbach

The Hazaras, a race of Mongol origin. They are very poor and live in self-supporting villages in barren, mountainous country. Their sons often join the army—to make a living

Pamela Magrath

The city walls and towers which made the medieval town of Ghazni a great fortress. In 1939 these walls were partly destroyed because they prevented the growth of the town

past under a dynasty of its own. Today, enclosed by huge medieval walls, it still offers a completely unspoiled picture, leading a closed-in, aloof existence, as though the centuries had passed over it in its fairytale sleep. Arms and splendid *pushtins*, sheepskin coats dyed yellow and embroidered in red silk, are produced there. In the dim, narrow streets the artisans with their apprentices sit in tiny stalls. The proud men of the Afghan tribes sit arrogantly beside the huge samovars of the *chaikhanas* (tea-houses), engaged in discussion. Caravans, their bells pounding, sway along the city walls.

But during the time I stayed there, Afghan soldiers opened the first breach and tore down one of the mighty round towers of the fortifications. Ghazni will change, as will all Afghanistan. Possibly the nomad tribes will be hardest hit. Today they still wander every autumn from their summer pastures in the Hindu Kush across the passes of the North-West Frontier down into India. Their lives and their habits follow an eternal rhythm, almost irreconcilable with the demands of a modern government.

But here too pity would be out of place. It is unseemly to love existing institutions simply for the sake of a romantic illusion or sentimental affection. What will be proved in Afghanistan is whether or not the same forces that have heretofore nourished the country's life and customs can renew and reassert themselves. For Afghanistan is a harsh, immensely vital and virile land. Those who have felt its refreshing climate and the strong young winds of its mountains and highlands fear no degeneration of any kind. One would like to believe that in this natural fortress of Asia, 'betwixt Iran, Turan and Hind', the most incisive changes and bludgeonings of our times will lead to a new and happy epoch.

Golden Goa

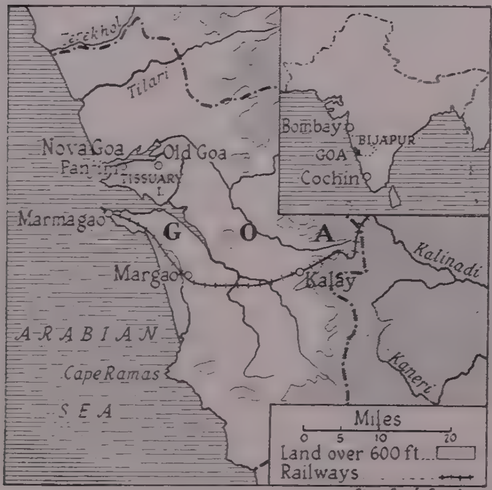
by LEONARD HANDLEY

Not many of us in the West have heard much about Goa, and it is almost as rare in the East—even in India itself—to find people who could put it accurately on the map. Subconsciously they would associate it with the Portuguese, and tell you that it was the breeding-ground of Goanese cooks and P. & O. stewards, and possibly crack some joke about its navy composed almost entirely of admirals.

Goa lies some 200 miles by sea down the west coast of India from Bombay. Leaving the Apollo Bunder at 10 A.M. one can reach Panjim, the modern capital of the small Portuguese possession of Nova Goa, within twenty hours. The old ruined city, built on the northern border of the island of Tissuary, lies some five miles due east of Panjim by river.

As late as the 16th century Goa was a second Lisbon; the extent of its commerce and industry raised the old capital of Asia well-nigh to the heights of Venice and Constantinople. Yet now—like the jungle Atlantis of Angkor—it lies ruined, covered with a thick growth of tamarind, jack fruit and jungle vines. Where now is its glory, that military, ecclesiastical and commercial magnificence, which made it the Rome of the Orient, a place in which 200,000 people once lived?

Old Goa was built by the Moors in 1479, and prospered so well on account of its harbour that at the end of the 16th century it had a circumference of 6 miles within which lived some 150,000 Christians, besides nearly 50,000 Mahomedans and Hindus attracted by commerce. Adil Shah, King of Bijapur, was fond of Goa and wished to make it his seat of government, but Albuquerque saved him the trouble by taking the city, which became Portuguese by conquest on February 10th, 1510. The conquerors transferred the seat of government from Cochin to Goa, fortified and strengthened it, embellished it with many churches and palaces, and developed it by encouraging commerce and establishing laws and tribunals—minting money in the



Stanford, London.

name of Dom Manuel the First. Albuquerque likewise encouraged inter-marriage between Europeans and natives to bring about a fusion of West and East by the threefold community of race, religion and language, with the result that this adulteration of pure Lusitanian blood with the least virile of all Indian races, the Malabar Hindu, helped sow the seeds of racial deterioration to which is attributed the downfall of Goa.

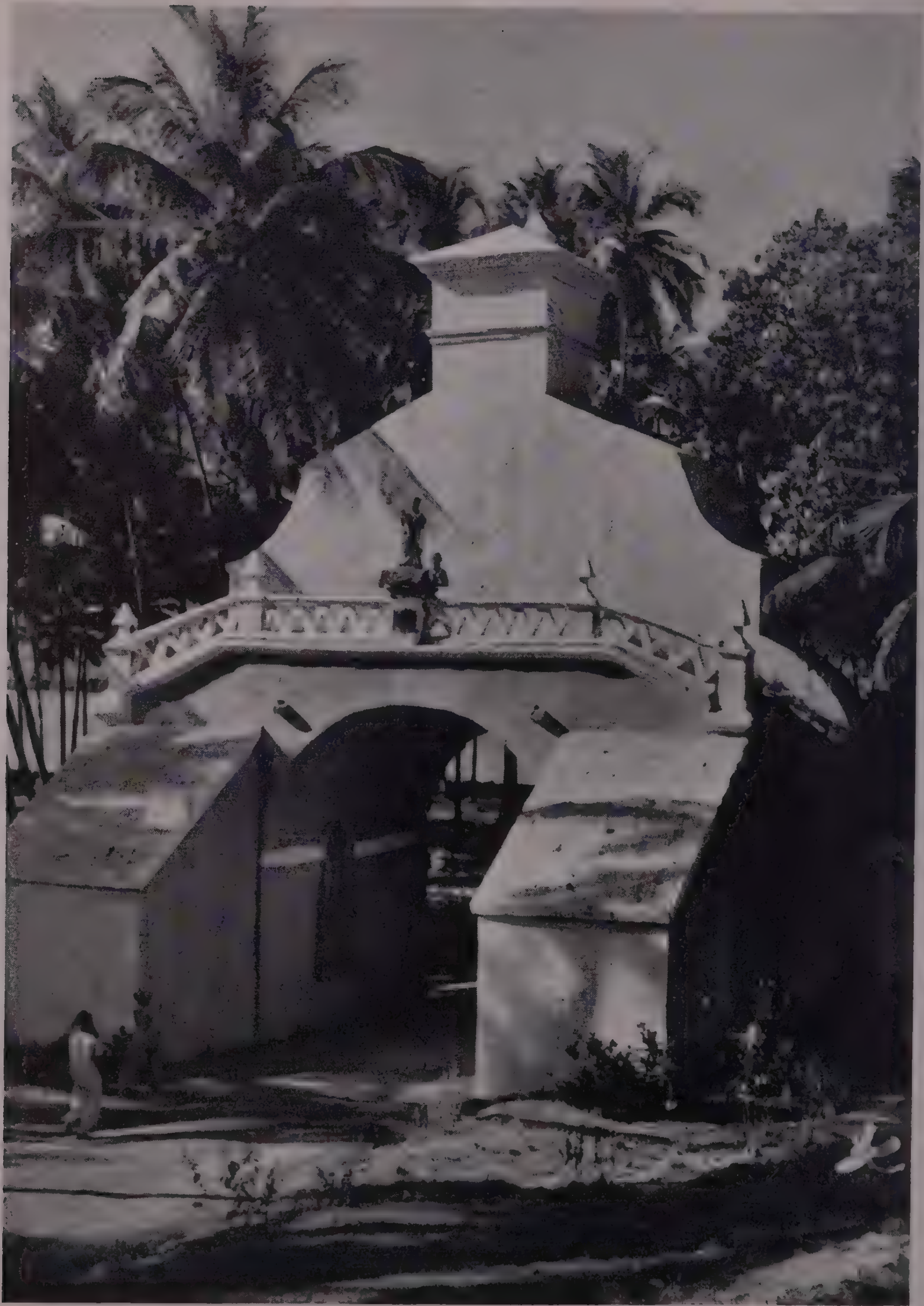
But there were other reasons: the constant drain of men and money from a nation only a few centuries old, possessing a population of only a couple of millions, of whom less than 50,000 guarded and defended the vast Empire over which the sun never set; the stranglehold of the rising power of England and Holland, and the subsequent domination of Portugal by Spain from 1580 to 1640. Added to these was a state of insanitation resulting in pestilence and plague.

Two centuries sufficed to witness the sunset of Golden Goa. The city groaned in misery; her trade dwindled, friends deserted her; Jesuits were suppressed and later even the cathedrals and convents were extinguished. The government moved to Panjim, and the city was abandoned to ruin—until even the ruins perished.

To the artist it is even now a dream city. A contrast of sun-dazzled walls, and deep shadows, concealing heavily bolted doors and barred windows with small mica panes, blind with the dust of bygone centuries. The sun glares down upon stone brought from Portugal, grey and warm with the patina of five centuries, a colour that time alone can give.

It would take an abler pen than mine to recreate, in a short article, the kaleidoscope of impressions which I and my companions gained from the moment we passed beneath the graceful Arch of the Viceroy on the sea threshold to the time, some hours later, when we bade farewell to the great company of ghosts which I felt had hovered over us on our pilgrimage. Impressions of light and shade, death and decay.

Since there have always been resident priests, cathedrals have survived in a better state than public buildings and houses. The most notable cathedral, known as the Casa Professa of Bom Jesus, occupies a central position in the ruined city. In one of its many beautiful chapels lies the shrine of St Francis Xavier, the great Apostle of the Indies. The shrine itself is a poem in shaded marble, silver and precious stones. A gift of the Grand Duke of Tuscany, it is fashioned of the finest red Carrara marble—the casket itself is supported by sixteen angels in silver, and is encrusted with precious stones. Within reposes the incorruptible (so legend says) body of the great Saint.



George D. Aked

The graceful Arch of the Viceroy—Goa's water gate on the sea-threshold—bears the arms of Vasco da Gama

Leonard Handley

Leonard Handley

A corner of Old Goa, conquered by Albuquerque in 1511, once a second Lisbon, now ruined and over-grown with tamarind and jungle vines

The convent of St Augustine, which stands in one of the main streets. The Augustines were one of the first religious orders to establish themselves in Goa and, in early days, were involved in disputes with the Jesuits over the site of the Jesuit college, which over-looked and hemmed in their convent

The 'incorruptibility' is in the nature of a miracle and the body must be seen if the legend is to be believed.

Briefly the miracle is this. St Francis Xavier, converted by Ignatius Loyola, came to Goa to live the life of a true Apostle of his Saviour, and soon earned the name of Santo Padre, the Holy Priest. During his all-too-short life he is accredited with over two hundred thousand converts to the Catholic faith. His conversions spread from Cochin, Ceylon, and far distant Malacca even to Japan. Then he determined to pass beyond the forbidden walls of the Celestial Empire, but died on the shores of Sanchan on the coast of China in 1552. He lay buried for over a year in quicklime, as the Pope had decreed that his bones should be brought to Rome for beatification.

On exhumation his body was found to be incorrupt, although buried deep in quicklime for a full year. It was brought to Goa and there placed in a silver shrine. A hundred years later it was exhumed, and the left arm amputated for the Pope in Rome. Blood flowed—and thus the miraculous story of the 'incorruptibility' originated. The body became an object of adoration, and soon assumed the healing reputation of 'Our Lady of Lourdes'. The Jesuits (to whose order the body belonged) soon recognized the publicity value of the remains and guarded them with the utmost jealousy. To prove to them that the corpse is still there, the body has been exhumed some eight times—roughly once in every fifty years. This exhumation is public, and is the occasion of a gigantic Catholic pilgrimage to kiss the blessed foot of the Saint. The body is exhibited under glass with the feet entirely exposed.

I attended a recent exhumation and was amazed at the appearance of the sacred remains. With frequent exposure to the air the blood has dried within the veins and the flesh is gradually crumbling. There is still a vestige of hair and some teeth, but a cataract now covers one eye. The veins have grown less resilient and are parchmented. Yet what a miracle that the body is not a heap of dust! And yet, if a miracle, why this gradual decay, and not complete preservation as in the first hundred years?

One of the toes has been missing since, at an early exhumation, it was bitten off and consumed, in a fanatical moment, by a female devotee.

Adjoining the Cathedral is the Casa Professa, the chief Convent of the Jesuits, whose cells are still occupied by Resident Priests. The corridors are one vast picture gallery of horrors: a sea of blood and agony transferred, with sadistic crudity, to canvas. Yard upon yard unfolds the awful history of the early Portuguese martyrs, their torture, and subsequent death, at the hands of the early pirates.

In perfect contrast to the Cathedral is the Palace of the great Albuquerque, of which but one single portal remains.

Perhaps the largest building in the old city was the Palace of the Inquisition. Once its walls covered nearly two acres of ground, and it had numberless cells and corridors running zigzag, as in a maze, to shut the victims off from communication with the outer world.

The Inquisition was introduced into Goa in 1560 by the Jesuits in order to stem, even in this distant city, the heresies of Luther and Calvin. Sentences were passed in the Cathedral of Bom Jesus, while the victims of the *autos-da-fé* were burned alive in the presence of the Viceroy in the Cathedral square.

The merciful hand of tropical decay has swept away all worldly memories of the horrors imposed by man in the guise of religion. A pile of pillars and a few stones is all that remains of the Holy of Holies of Constantine da Braganza, the Chief Inquisitor, and of the great sadists, Alexo dias Falcao and Francesco Marques, whose signatures, appended to over 40,000 Inquisitorial processes, were discovered in 1800 and destroyed.

* * *

Towards sunset of a memorable day, as the great Cathedral bell, precursor of the dread auto-da-fé, warned us of the approach of night, and of the fever mists from the river, our guide hustled us through the *Porta da Despedida dos Justicados* (the Gate of Farewell of the Condemned). Thus we took our last look back at the deserted city. Grey and livid as a snake's discarded skin she lay amidst the shadowed panoply of half a hundred cathedrals, martyrs and Saints; tinsel and decay, dust and malarial death. An awful testimony to the futility of an over-fanatical religion.

Yet, as the Portuguese say, Goa is still glorious in decay. A lesson to men and nations who put their trust in the vanity of human hopes and human greatness. A link with the glorious yesterday of the Portuguese, who were once the pioneers of Catholic religion and European civilization in the East.

Epirus

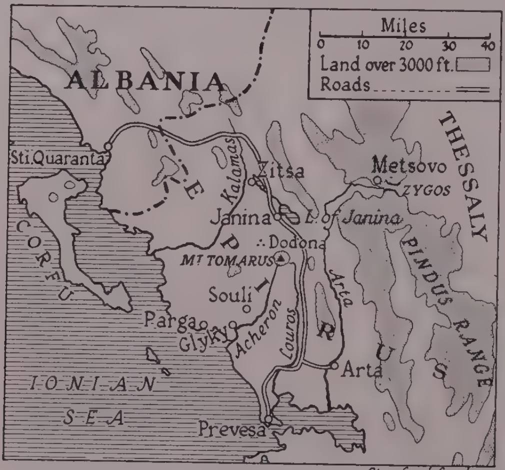
The Greek Province with a Bad Name

by CATHERINE HARRISON

Read Homer, read Byron—and you will have a picture of Epirus. The 'bad name' was first given to it by the Ancient Greeks who, though they visited the Oracle at Dodona, shunned the Epirotes as Barbarians. But right up to the outbreak of the present war the region was commonly associated with robbers and bandits—and thus remained immune from any influx of foreign visitors that its literary associations might have brought

Epirus, the extreme north-western province of Greece, and so the nearest to western, sophisticated Europe, has been perhaps the least visited spot in all Hellas. The tourists at Corfu used to gaze daily at its mountains, but they did not venture among them. The Guide Books told them that " Epirus is not yet entirely safe ", and even Greeks (who ought to have known better) hesitated to recommend a journey in these parts and talked darkly of 'bandits' and 'no roads'.

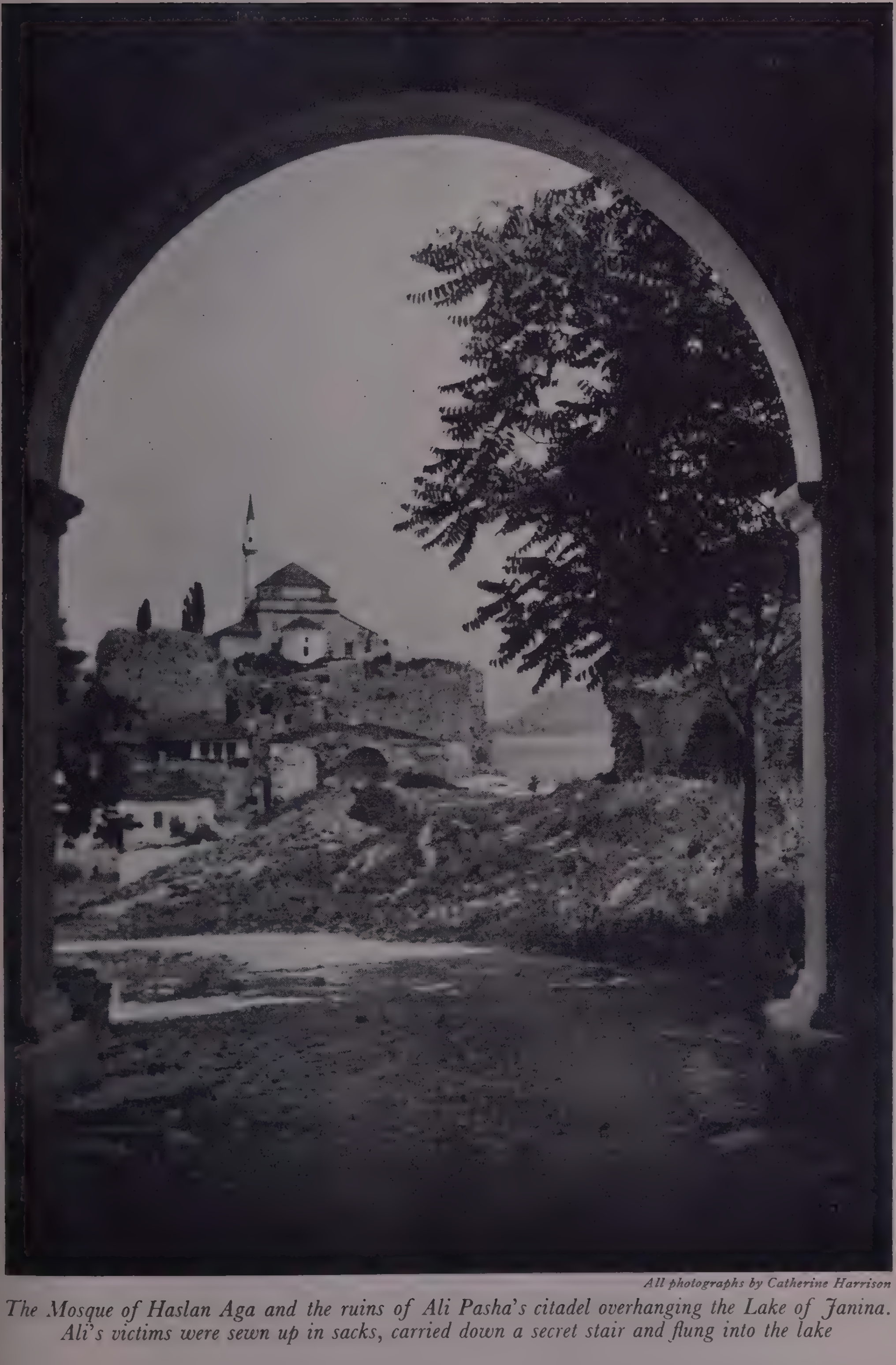
This attitude was nothing new; the Ancient Greeks talked in just the same way. They looked upon the province as a place apart and did not count its wild inhabitants as true Hellenes. Epirus, corrugated by deep, parallel mountain chains, and destitute of any proper ports, remained to them a mystery land — the land where the sun set and where Homer had placed the Realm of Hades. King Pyrrhus later made it fleetingly illustrious in the struggle against Rome, but it soon sank back again into a tempestuous obscurity that ended only with the advent of the famous Ali Pasha of Janina in the late 18th century. Not until 1913, after the Balkan Wars, did the greater part of Epirus finally become Greek; and even then a northern strip was included in Albania by an entirely artificial frontier.



Stanford, London.

There is no railway in this province and there are few roads, so that to explore more than the three towns of Prevesa, Janina and Arta, one had to be prepared to walk or ride, and to 'rough it' generally, sleeping in dirty and verminous inns, or more often in peasants' cottages where there is no privacy whatsoever. As for safety, I can only state that during three visits to Epirus, journeying often on foot with a local peasant for guide, and sometimes quite alone, I met with nothing but the most friendly welcome everywhere (except from dogs!), and when I lodged in cottages I was not once allowed to pay for my food and bed.

Janina, in the centre of Epirus, could be reached easily enough, as it is on the one road running through from south to north—from the port of Prevesa up to the Albanian frontier. And there was at certain seasons an air service from Athens; this gave a specially delightful approach, over the mountains, through the hovering eagles and then down low over the green



All photographs by Catherine Harrison

The Mosque of Haslan Aga and the ruins of Ali Pasha's citadel overhanging the Lake of Janina. Ali's victims were sewn up in sacks, carried down a secret stair and flung into the lake

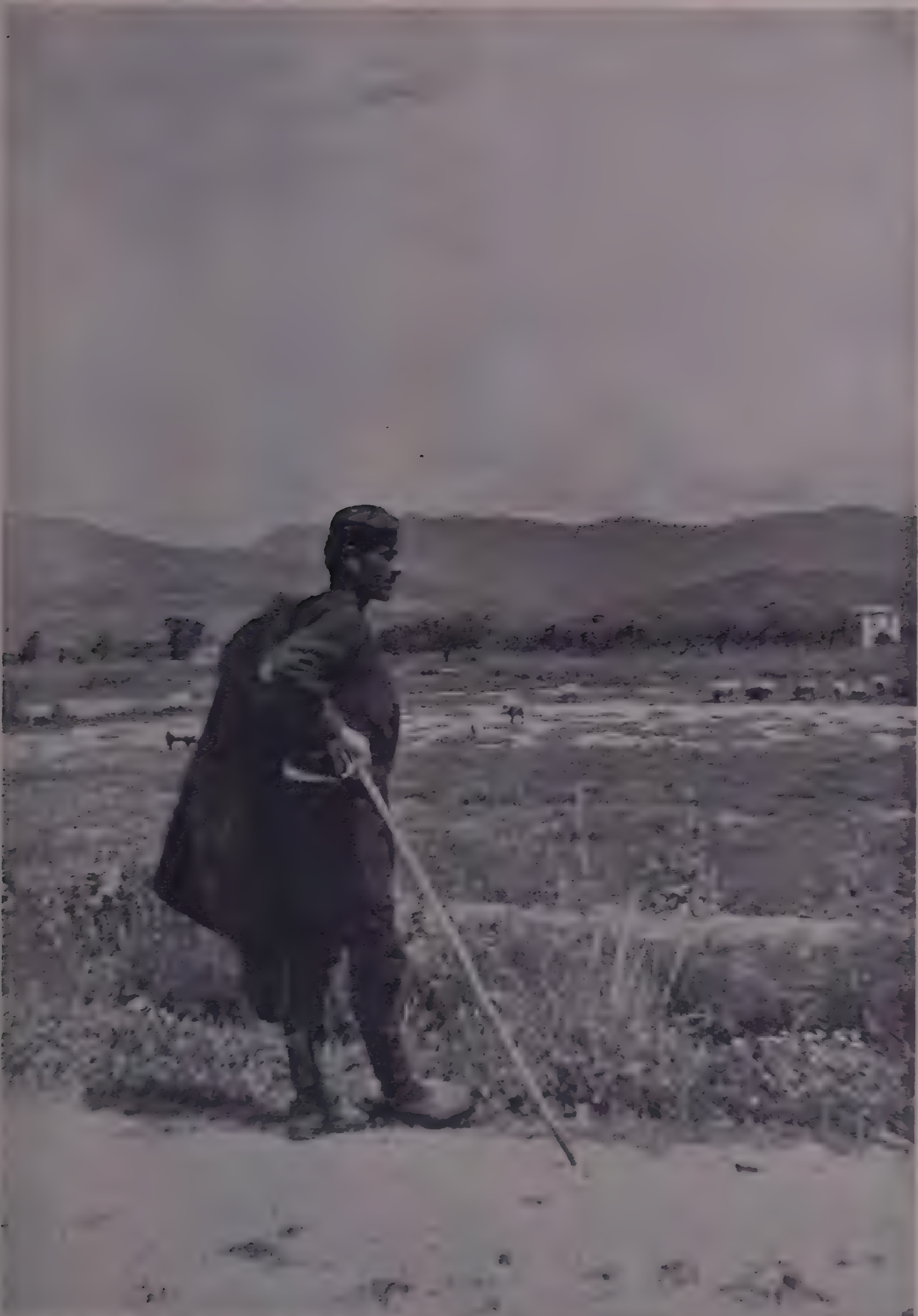
Lake of Janina and the mosques and minarets and trees. The 'plane came to rest in a flowery meadow with not a single hangar to spoil it, where rough-haired and hooded shepherds who had never seen a train stared placidly at the machine. On the east rises the snow-capped Pindus range, its foothills reaching down to the Lake; on the south a little promontory juts out bearing a mosque and the ruins of the castle of Ali Pasha—once Dictator of Epirus.

The high walls of this old citadel enclose a maze of alleys bordered by little houses of white, orange, yellow and blue. The windows are barred, but the stranger can peep into the whitewashed courtyards and there he may see the family, watering the flowers that grow in amazing profusion in earth-filled petrol tins; and he may be invited in to partake of the traditional spoonful of jam and glass of water, while his host plies him with questions in the usual Greek style.

Within the citadel walls of Janina many houses date from the time of Ali Pasha when the town was completely Moslem

Outside the citadel comes the bazaar: street after street of bustling, open-fronted shops displaying baskets of struggling lobster-like creatures from the Lake; gay mule harness; silver clasps and rough ornaments; red shoes with up-turned, tasselled toes, and woven wool bags in which to carry all these. Here and there a mosque crumbles quietly into ruins, while on its broken minaret a couple of storks build their nest and clatter their beaks high above the animation of the market. Though the mosques crumble, there are still a fair number of practising Moslems left in Epirus, distinguished from the throng by their white woollen fezes. Peasants of every other type can be seen, too, mostly of mixed Albanian blood, handsomer and more stalwart than the southern Greek and with higher colouring and rounder heads; and there is a big proportion of wandering Vlach shepherds, come to sell a little surplus cheese or wool and to do their 'shopping'. Many in this crowd keep their traditional costume of pill-box hat, goat-hair cape and fustanella kilt, or queerly cut breeches and coatees; but some wear a bastard dress and the cheap 'sports cap' that has swept upwards through Greece, from Athens, like a plague.

One could not spend a day in Janina without hearing something of Ali Pasha the Despot. Though he was assassinated in 1822, both townsmen and peasants speak of him as if he had died yesterday. This amazing man, an Albanian of humble extraction, was clever and illiterate, courageous and cruel, and by means of his virtues and vices got himself made



A shepherd of Epirus wearing the pillbox cap, up-turned shoes and shaggy goat-hair cape

Pasha of Janina by the Sultan. His ambitions and his domains increased so quickly that he was soon beheading and torturing French officers without punishment and corresponding with Napoleon as an equal. Wherever one goes in Epirus a peasant is sure to point out one of Ali's ruined strongholds and his cobbled mountain paths; they love, too, to show the exact spot where the old villain drowned ladies in sacks, roasted prisoners alive or flayed fallen favourites. He was the Greeks' oppressor, but a touch of admiration is obviously felt for this blue-eyed, white-bearded Dictator.

Another celebrity, still gladly talked of by Epirotes, is Lord Byron (pronounced Veerono). During his first happy visit to Greece the poet spent much time here as Ali Pasha's honoured guest. In *Childe Harold* he has immortalized both the Despot and the province, and Greeks have not forgotten that Byron died for their country. Their continued gratitude is touching indeed, and the English traveller has reaped the benefit.

In April 1938 I visited, alone, the little mountain village of Zitsa, Byron's 'Monastic Zitsa', a thirty-mile journey from Janina. I saw at once that the arrival of a foreigner was an event; the Headman was quickly fetched, and a lodging worthy of receiving a British subject was sought with eagerness and care. Then, while a special

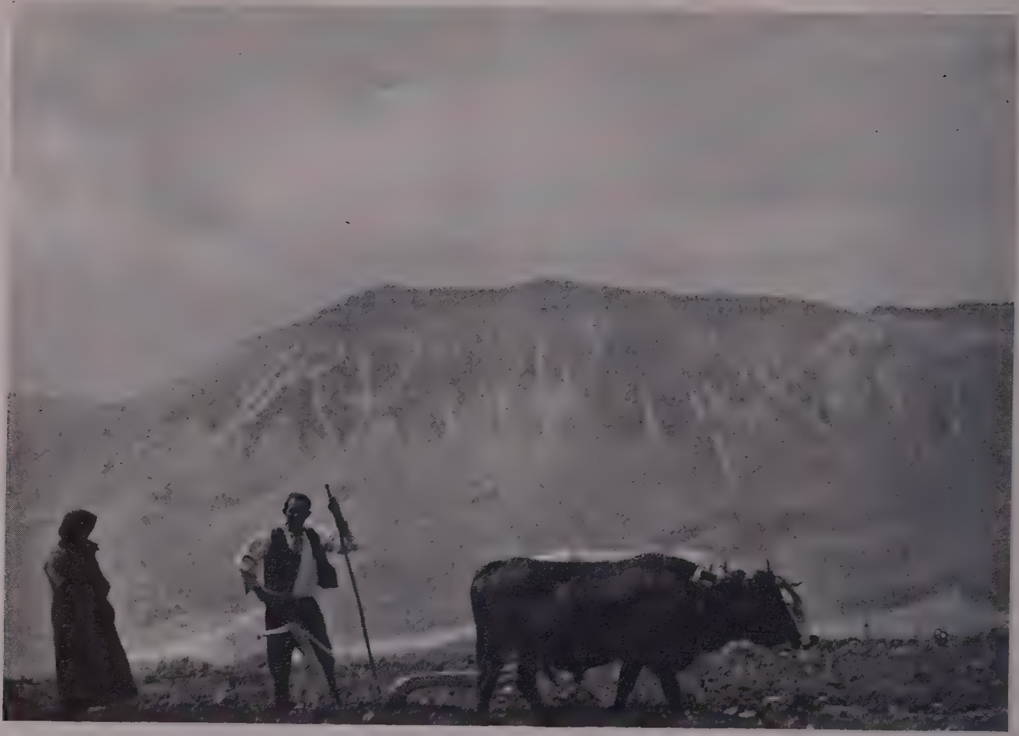
Zitsa has been delightfully and accurately described by Byron in Childe Harold. *It is perched on one little hill while its monastery (where the poet stayed) stands on the other*

The Monastery of Zitsa bears a plaque with a quotation from Childe Harold *which every Greek child can spell out. The monk in charge is full of stories of the poet*

supper was being prepared at the eating-house, I was escorted by the village notables to visit the monastery where Byron stayed. "You knew Byron came here? He was a good man. The English are good"—and then the embarrassing query "Do explain why England didn't defend Abyssinia, too?"

I have retained as perfect a memory of Zitsa as Byron did. His white monastery on its leafy hill, the rushing Kalamas river in its gorge far below, the absolute peace—all these were so vividly described in the second Canto of *Childe Harold* that anywhere else in Greece they would have been an attraction for romantic tourists; but the bad reputation of the Epirote mountains has saved them. Willingly would I have stayed in Zitsa for weeks, but the free hospitality showered on me, a chance visitor, was so overwhelming and so difficult to repay that this was impossible.

South-west of Janina, at the foot of Mount Tomarus, lies Dodona, the site of the oldest of all the Ancient Greek Oracles. It was dedicated to Zeus the Thunderer—and it is interesting to note that modern meteorological statistics show this valley to have the highest rate of thunder in all Europe, *i.e.* forty-nine stormy days a year. It was an obvious site for an Oracle. Here Zeus spoke in the thunder, in the rustling of his Sacred Oaks and in the clanging of metal bowls suspended in the wind. I could find no oak trees in Dodona; but excavation has laid bare a fine theatre,



Mount Tomarus in the background gives birth to the little Acheron, river of Hades. In the valley lie the ruins of the sanctuary of Dodona. The wooden plough in use is exactly as described by Hesiod

the foundations of sanctuary buildings, and a great number of leaden tablets inscribed with the questions asked by pilgrims—who did not hesitate to trouble their god on the most trivial matters (such as when one, Agis, asked "Whether the blankets and pillows that disappeared were lost or stolen"!).

Behind Dodona stands the majestic Mount Tomarus, on whose slopes rises a stream that winds a difficult way westwards through rocks and precipices to the Ionian Sea. This river is the Acheron, the ancient river of Hades, and a three-day expedition along its course from Tomarus to the coast is one of the most startlingly savage yet beautiful journeys in all Epirus. The 'path', often edging round precipices and once crossing a precarious bridge of branches, is better negotiated on foot than on mule-back. After about one-and-a-half days' walk from Dodona the desolate little mountain plateau of Souli is reached. Souli is famous in modern Greek history and legend as the home of a tiny rebel republic of Christian mountaineers (largely of Albanian race) who, from this strong position, defied the Turks all through the 18th century. The thrilling courage and ingenuity of the fifteen hundred fighting Souliotes, and the stubborn resource of their wives, are the theme of a saga that every Greek loves to sing. The traveller in these mountains has only to show his interest and the stories will come pouring out: "This is the path where Tsavellas escaped. This is where his wife, Moscho, led the women to the attack and rolled rocks on the climbing Turks." Then in a sadder voice they go on to describe how Souli fell and how the monk, Samueli, blew up the fort rather than surrender; those women who had not died beside their husbands climbed with their children to the heights of Zalongo, gathered on the verge of the precipice, hurled their babies over, and then, dancing in a round, jumped each in turn to her death.

The Souli plateau is today almost exactly as the Turks left it, with the burnt and blackened cottages lying in ruins around a few wells; the only memorial is a rough stone monument on the site of the blown-up fort. But a tiny, one-roomed school has recently been built near by, where the few mountain children of today gather for their lessons, high up on this historic spot.

Below Souli, the Acheron runs in a deep chasm, skirted by the narrow, slippery path at a terrifying height until the mountains come to an abrupt end; there the torrent shoots out into the plain and can be seen winding its way to the shining Ionian Sea a few miles off. The marshy land thus formed corresponds to the 'Acherusian Lake' of antiquity and the little Vourvó stream that joins it later on is identified as the 'Cocytus' of Homer. As to the poet's having really had a precise spot in mind for his Hades, modern scholars are mostly sceptical. What is certain, however, is that later Greeks such as Thucydides and the 2nd-century A.D. topographer Pausanias, firmly believed it to be Homer's 'mead of asphodel', "where dwell the souls, the phantoms of men out-worn". The modern traveller will be struck by the shimmering

In the mountain fastnesses of Souli where a band of Christians kept Ali Pasha at bay for years—giving rise to a whole cycle of legend and song masses of asphodel growing wherever the land is not ploughed, and he will also note the aptness of Homer's description: "A waste shore and the groves of Persephone, even tall poplar trees and willows that shed their fruit before the season". Here the Acheron carries a great amount of fresh water out into the sea, and for this reason ancient writers called the little harbour 'Glykis Limen' (sweet harbour). Today, however, the name has been transferred to a point higher up the river, and 'Glyky' is the village where the Acheron leaves the mountains. Here, at Glyky, under a tangle of weeds, can be seen a ruined church on ancient foundations and containing many of the elements of the old temple which it obviously replaced. It is dedicated to Aghios Donatos (St Donatos), but the probability is that this spot was originally a sanctuary of Aidoneus (Pluto), and the Christian saint, owing to the similarity between the two names, simply inherited the temple of Hades! (This is quite common in Greece —Demeter, for instance, becomes St Demetrius and Helios is changed to St Elias.)

Path along the Acheron towards mountains of Souli. Later Greek writers placed Homer's 'Realms of the Dead' in this little plain

Half a day's ride from here northwards along the cliffs brings one to Parga. It is a delightful path, though the wolf-like sheep-dogs that lie in wait and then rush viciously at the stranger need close watching and plenty of stones. These brutes are said to be descended from the hounds of the Molossians who inhabited this part of Greece in antiquity, and the traveller will hardly be surprised to learn that they in their turn were said to spring from Cerberus, the Hound of Hell! Certainly they are handsome creatures, though their heads are spoiled by the shepherds' absurd custom of cutting off half of one ear, 'to make them hear better'.

Parga is a coastal village of luxuriant vegetation, rocky coves and curving sandy bays. It slopes from a miniature quay up to a shabby mosque. A ruined Venetian castle crumbles on a rocky headland and rusting within it are several old British guns; for Parga was in British hands from 1814 to 1819. It had held out for years against Ali Pasha and finally called in Britain to succeed France as a protector. She accepted—but later on she arranged for Ali to compensate the inhabitants, who all crossed to Corfu and took up lands there.

From Janina again delightful journeys can be made eastwards into the great Pindus range. A road is slowly being built to link Epirus with eastern Greece, but it will not be finished for some time; meanwhile these untamed mountains, once the hiding-place of brigands, can be explored on foot or on mule-back.

Parga—the prettiest little port on the whole Adriatic or Ionian Sea is entirely unvisited and unspoilt. In turn its little fortress was held by Venetians, French, English and Turks

In the depths of them the wider tracks cease altogether and only paths climb the steep slopes. The marvellous stone-built village of Metsovo, a mountain stronghold of great strategical importance to Greece, controls the one narrow pass—the Zygos—over into Thessaly. The Zygos, at 5000 feet, is everything that a pass should be—a narrow cut through the wall of rock, opening as by a doorway from the barren Metsovo side onto the sudden smiling greenness of Thessaly beyond. Nearly all the people of this region preserve their special costume, which adds greatly to the already remarkable majesty of their gait. The healthy beauty of the Metsovo women is delightful to see and is matched by the dashing, almost brigand-like bearing of their men.

The road from Janina to Prevesa (the only Epirote port of reasonable size) runs southwards. At first it rolls over rich grass-lands where high-stepping storks pick their way among sheets of purple orchids; then comes a magnificent section of mountain road, and finally the shade and coolness of the Louros river. The traveller should turn off for a mile or two down the short Arta road to visit the little Byzantine churches of that town and to see its famous bridge, so renowned in Greek song. This is the legend of the 'Bridge of Arta':

"The king commanded three brothers, masons, to bridge the River Arta for the first time. Each winter the resentful torrent destroyed their work and at last the king threatened them with death should they not succeed. Then a bird told the eldest brother to bury the wife of

Metsovo—a mountain village of about 2500 inhabitants bars the way to the Zygos Pass over the Pindus Mountains. Many of the wandering Vlach shepherds (as pictures in The Geographical Magazine *for October 1937 showed) bring their herds up to high pastures here each spring*

The inhabitants of Metsovo are renowned for beauty and stature. All wear the regional costume, and dresses of special elaboration are brought out on feast days

This fine old bridge over the river Arta is the subject of legend and song. Partly antique, medieval and modern, it is so narrow that even a small car crosses with difficulty

the youngest one in the foundations and all would be well. The eldest brother thereupon secretly told the young woman to bring out her husband's dinner to the bridge somewhat earlier that day. He then suggested to his brothers that they should bury the wife who should arrive first, in the piers of the bridge, as a sacrifice to the river. Reluctantly they agreed. The youngest wife, of course, turned up first, whereupon her husband began to lament.

" 'Why do you cry?' asked the wife. 'Because I have dropped my ring into the foundations of this bridge.'

" 'I will get it for you,' said the wife, and climbed down into the pier. At once the brothers rushed and walled her in—refusing even the little opening she begged for in order to suckle her baby. The River Arta accepted the sacrifice and allowed itself to be bridged."

Beyond the Arta turning, the Janina-Prevesa road winds between mountains and plain and it was here that in 1917 the car of the Bank of Greece was 'held up' and robbed by brigands. A great search followed and the ringleader, Meremetis, was captured. He was led out, after trial, to face the firing squad on the very scene of his crime. Here he was offered his life if he would 'give away' his accomplices; he indignantly refused, and was shot. Since then there has been no more brigandage in Epirus—but Meremetis has become a hero!

With Odysseus in the South Atlantic

by ALEX COMFORT

When I first met Odysseus, in the agent's office in the Avenida 25 de Mayo in Buenos Aires, I did not recognize him at once. He was introduced to me as Captain Hristoferos Eumorfopoulos or something of the kind. I shook his large pudgy hand and looked down at him and all round him. He differed so very widely from the bull-necked and bejowled English skippers of my acquaintance, to one of whom I had just bidden adieu after a six-thousand-mile voyage from Rotterdam. Knocking about the Argentine capital in the luxurious slack period ashore which follows a long voyage, I had formed the desire to sail home with a Greek captain, and see a little of that seamanship and ingenuity which commentators on the Odyssey are accustomed to call 'many-counselledness'.

Odysseus was about five feet high and nearly three feet wide. He had large bulging eyes, a round face covered with little patches of red veins and anxious wrinkles; and he wore a large black beret, carpet slippers and an amorphous grey woolly jacket which made him look like nothing so much as a hot-water bottle. And there we stood bowing and scraping to each other on the agent's mat. I was almost too engrossed in the little man's appearance to notice that I was being commanded to appear at C New Docks that evening to go aboard. We retired backwards through the two separate doors leading to the street and the master's room, bowing and smiling with disarming courtesy.

I found the ship after some trouble in the gathering dusk. I had walked nearly a mile over dockside rails and cables, threading my way through piles of sacks and boxes, and walking round the rumps and backsides of quiescent ships, with the watch smoking over the rail, when I saw the Greek ensign like a rather daring shirt astern, and the hull of a long, low, black tramp; her steam was up, and all her valves and whistle cocks fizzing softly, for the docks are quiet at that hour on Saturdays. On the after-deck a disconsolate little knot of cattle stood nose to nose in a rough pen. I could hear the hard breathing of a large animal unspecified and the quacking of ducks. I also noticed a five-degree list on the vessel and a strong smell of hay and onions. As I tramped down the plank with my kit I ran into a dirty individual with his shirt-tails hanging out, whom I seemed to have surprised in robbing the pantry. (It later transpired he was the Steward.) I asked for the captain in Spanish without success, and was about to try a fresh gambit when a door flew open and the little man was upon me.

In his hand was a large bottle, with which he waved me into the saloon. I met a solid wall of tobacco smoke which took my breath away, and a babel of voices which deafened me. Odysseus was leaping and trotting in and out among his guests, hailing me in English, his large placid wife in German, the comprador's clerk in Spanish, and a gaunt, weary-looking engineer from the port authority in quite passable Scots. The room was filled with the vapours of anisette and ouzou, and mild Greek cigarettes were being smoked on all sides, their ash filling the big blue Attic-ware trays with their classical lettering.

As I regained my faculties the whistle boomed out overhead, the crowd thinned, depositing their glasses on the sideboard under the oil painting of Hamburg, and I was bundled out into the fresh air on deck. The plank came in with a run, howls were exchanged between bridge and poop, and we swung out into the oily pool of orange light which was filling the middle of the basin.

Ashore a figure brandished a glass.

" 's hygeian sas!" it roared.

"Cheerio," sang out the skipper.

* * *

In about two days I began to notice some of the navigational monstrosities which were going on aboard the ship of Odysseus. In another two, I was so utterly bewildered by them that I was more or less resigned to my fate. By the time we reached Senegal, and I found that we were still afloat and likely to remain so, I began to turn from alarm to admiration. Many-counselledness is a terrifying spectacle to one used to English ships and English ways, but it is pragmatically sound.

The first point of speculation which arose in my mind concerned our lifeboats. I am a cautious sailor. I cannot sail with an easy mind if the ship's boats are not provisioned and inspected at fairly regular intervals. But on mounting the boat deck of the ship of Odysseus I encountered a large pile of planks and baskets which hid from view all trace of the boats. Surmounting these I came upon an area of deck bounded on each side by a boat. But in each boat was a mighty wire cage filled with poultry: the boats had clearly been lately painted, but without removal from their chocks. The fall-ropes were stiff with paint, and had obviously not been used in months. In the midst of the welter of ropes, boards and rubbish that filled the rest of the deck, the skipper went steadily about his task of counting the eggs, which he assured me the engineer's wife was in the habit of purloining. He then handed the spoils to the first mate, who carried them off and locked them in his roll-top desk, together with a large supply of sausages which occupied the upper compartments.

Wandering onto the bridge I was momentarily disorientated by a huge stack of vegetables—marrows, tomatoes, melisdanas—which occupied most of the lower bridge, together with half a carcase of beef tastefully wrapped in signal flags. Overhead in the monkey-parlour the officer of the watch, in a chauffeur's peaked cap, was amusing himself in patting a minute white dog, while the man at the wheel lounged easily over the binnacle, cracking peanuts and throwing the hulls onto the captain's cabin skylight. I opened the door marked 'Radio' in the hope of finding the operator, and retreated with haste when I found that I had penetrated the bedroom of the Captain's daughter. The radio, I afterwards found, had been transferred to deck level by the skipper, a devoted father, and was periodically washed out.

I passed the devoted father pegging out washing on the bridge a minute later. At this pastime he was most capable, assisting his wife with large, damp, uxorious fingers, or leaning against the jamb of the bathroom door while she pummelled the clothes. "My vife," he would say, "she ver' strong woman."

At eight bells exactly, after shooting the sun, every English skipper of my acquaintance will descend from the bridge, put his head into the pantry and say "Ready now, steward". At about eight bells the Greek skipper would march into the saloon followed by the ladies, tuck his serviette into his collar, and bawl "Niko!!" After several repetitions of this a growl would come from the pantry, and Niko, shirt-tails in evidence and grey slacks at half-mast, would bring in a huge tureen. To say that Niko followed the tradition of mental deficiency which obtains among tramp stewards is inadequate. He was in the habit of going and hiding aft if summoned by anyone other than the skipper. Now and then a simultaneous yell of "Niko!" from either end of the alleyway would bring him growling from a little den full of Chianti and sausages, the latter suspended with a rat guard at each end of the string from two hooks. (Oh no, sir, there were not many rats. Had not Aristoteles caught only seventy-three during the previous month?)

Rarely could we finish our meal uninterrupted. I soon learned that the accuracy of the skipper's aim with olive pips made it unnecessary for me to follow an impulse to turn up my collar. But the practice of killing a bull, *decrescendo e morendo al fine*, outside the saloon during luncheon, and the subsequent hanging of the liver in such a place that it could drip on the skylight over my head, provided a painful diversion. And later removal of the drops by the puppy terminated my meal rather abruptly. On another occasion the first mate brought in a complaint about the men's food which led the skipper to dash from the room like a bullet, and stand for a full ten minutes with his inadequate nose two inches from that of a crop-headed fireman, bawling at the top of his voice, while his wife and daughter wrung their hands and wept. But on most days we sat and ate inordinately.

There would be about six courses, each in a quantity sufficient to fill the average bowler hat—there would be red, curdy soup, fish, of which more anon, steak, brain fritters, rich sauce, and a dry bulky sweet made of arrowroot and resembling gelignite. There were usually also *hors-d'œuvre* and eggplant, washed down with a multiplicity of drinks from vermouth and ouzou to villainous Greek brandy. Any default on my part was met with "But Mr Comfort, you are not well?" Expostulation was hopeless, and I must needs eat another bowler hat full.

We were on the equator when the captain bethought him of the fish beneath our keel. The forge was brought out upon the after-deck, and we stripped to the waist and manfully turned the handle under a sky of unclouded brass, while every deck rivet could be felt red-hot through the soles of our shoes. The second mate was smith, and a more adept I have never seen. With dextrous taps from a tremendous hammer he curved and barbed his hook, drawing it from the fire sharp as a needle. A hook and line would have sufficed for an English angler. But not so the Greek. We ran out a sixteen-foot rod made of planks lashed together, and paid out our line therefrom. We next took it through a block at the bulwark, up to the masthead, down to the deck, and having threaded a spiral spring on the rope, we tied an anvil to its lower end. The second mate climbed out precariously along the rod, and affixed to the line a long skein of spun-yarn, which was carried over the boat deck and down the engine hatch. On its lower end was hung an oil drum.

We were at breakfast when the fish bit. There was a torpedo-like crash as the oil drum hit the cylinder heads, a wild jangle from the telegraph, and we hove to. On the after-deck all hands were at the line, shouting "Psari! A fish, a fish!" Slowly we came about, making a lee, and slowly the great silvery queenfish came in. It was dumped on the deck to be photographed, and the cook hit it rather half-heartedly with an axe. We returned to our meal, and the men turned to the almost daily task of bathing the dogs, a work which was performed by all hands with the ship's hose.

We ran into Dakar late one night, and sailed next day. The skipper went ashore in the height of the tropic summer in a blue suit and Homburg, and spent the day trying to buy baking powder, for which he did not know the French. And in a few days we were in the Bay. On the first day that we began to roll, Niko painted the narrow alleyway with enamel from end to end, stood a little flight of three steps surmounted by a paintpot in the middle, and served canned peaches keel downwards for lunch.

Next day, the skipper looked at the glass. He took it down, shook it, consulted the one-and-threepenny alarm clock that served us as a chronometer, and said "In my opinion, it will blow". From that hour he was a changed man. There was no more washing. He marched round the deck, a sailor in every limb, ordering the lashing of hatches and stowing of ventilators, Odysseus at last. The storm broke at night and the darkness passed in a mass of wildly scouring white water and running figures—the bosun was carried down the falls onto the deck and broke his leg, the starboard boat came adrift and stove in the radio cabin. The surviving bull came into the saloon for shelter.

And next morning No. 1 hatch came adrift. In the midst of a tossing, swirling maelstrom the crew scurried and clung, hiding behind winches and ventilators and soaked to the skin. Among them stood Odysseus, no longer the comic skipper, immovable in his oilskins and unconcerned as if he had been strolling in his Chian garden.

* * *

I left Odysseus telling tremendous falsehoods to the Eastham customs. There are times when I wonder if that insane voyage was real. I have learned the truth of a remark made to me by the best friend I have among British skippers: "Greeks . . . you never can tell with Greeks. If I hit bad weather, I follow the rule book, and as like as not come through all right. But a Greek'll make his men get out and push, and if the worst comes to the worst, he can sail home on the funnel." There was once a Greek picked up on the Cornish coast who had six times been sole survivor of a shipwreck. The old hospitable, ingenious, mendacious, blockade-running Odysseus is still alive in a thousand Chian homes and Chian ships. I wish him a happy return to Ithaka, and may the suitors not be too many nor too insolent for his discrete valour, lest a saga be lost.